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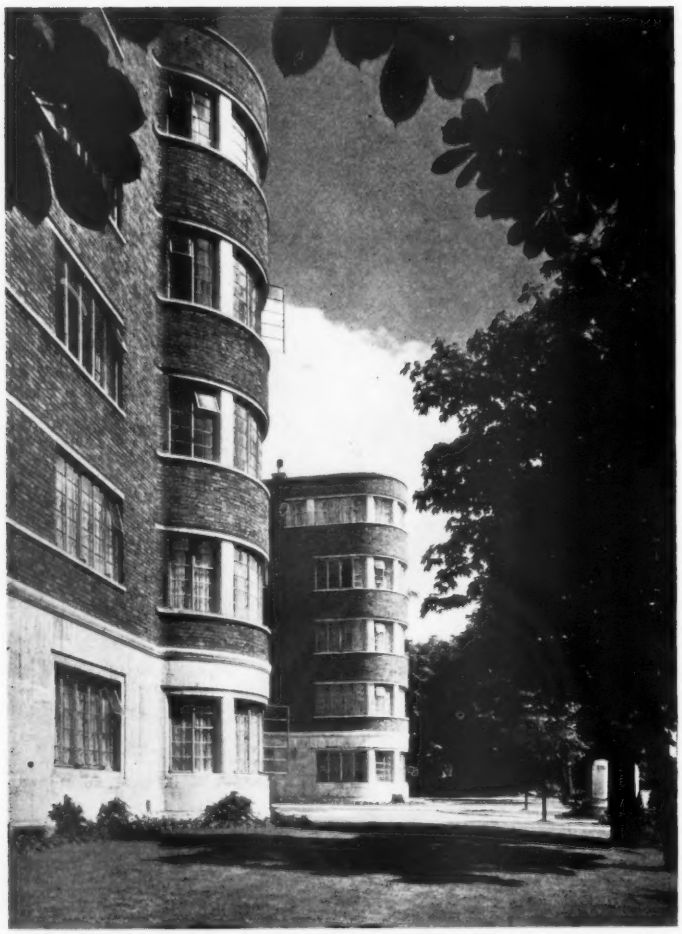
CONTENTS FOR 21 NOVEMBER 1938



STOCKLEIGH HALL (Flats), Regent's Park, by Messrs. Robert Atkinson (Mr. Robert Atkinson and Mr. A. F. B. Anderson [*FF.*]), awarded the London Architecture Bronze Medal for 1937

JOURNAL OF THE
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Journal

FOR WHAT WE HAVE RECEIVED . . .

The Institute year that has just ended has been a bumper year for one side of the library, for during it we have received more gifts to the drawings collection, and more of them of first-class importance, than in any recent year. One delightful feature of these gifts is that most of them have some domestic connection with the Institute and the men whose works have been given to us. We have referred before to two of them : the gift from Mr. Caryl Barry of drawings by his great-grandfather Sir Charles Barry, which included a lost group of William Kent's Houses of Parliament drawings of 1739, and to the gift from Sidney Smirke's granddaughter, Mrs. Biggar, of drawings and letters by Sir Robert and Sidney Smirke. Other gifts are of some fifty sketch books and note books compiled by W. R. Lethaby from the age of 17 until the last years of his life. These are personal documents full of material of absorbing interest not only for students of Lethaby's work but also for those whose studies lead them to the same periods of architecture that particularly engaged Lethaby's attention ; among the most valuable are several, compiled during the 'twenties, on Georgian London. All these came from Lethaby's sister-in-law, Miss Grace Crosby. Another domestic gift is from Dame Emily Penrose and Mrs. A. J. Dickson of water-colour and other drawings by their father, Francis Cranmer Penrose, President in 1894-96. Penrose is known to most architects for his studies of the Parthenon, which he measured to the hundredth part of an inch, but his distinction as a mathematician and astronomer is supplemented here by revelations of Penrose as a romantic water-colourist whose best studies out of several hundred we have received are vigorous, spirited and personal, equal almost to Lethaby's, and more acceptable to modern tastes than the, to us, more banal studies of most other Victorian architect water-colourists. With this gift there has come to us the whole of the Penrose-Alfred Stevens correspondence concerning that most pathetic story of the Wellington monument in St. Paul's, of which Penrose was then Surveyor.

Water-colours lead us to the greatest R.I.B.A. gift of this century, the one hundred and fifty drawings by John Sell Cotman which we have received by bequest from Mr. Sydney Kitson. More must be said of these later, when a big exhibition will be held of them, probably in June 1939.

These big gifts must not be allowed to eclipse the constant accession to the library of books and drawings from our members. One accession leads in a delightful way to another ; for instance, Mr. Harry Heron [*Ret. A.*] responded to our purchase of two of James Wyatt's drawings of his scheme for Downing College by giving us the water-colour study of Wilkins's design for the College which was illustrated here in October, and a non-member, Mr. A. D. Power, whose great collection of London drawings is in the London Museum, has added, through the agency of the Friends of the National Libraries, to our Palace of Westminster drawings by giving a drawing by Sir Richard Westmacott of the Palace from the river and a coloured engraving of Barry's competition scheme. Another persistent friend is Mr. J. E. Yerbury, who during the past several years has been transferring many books from his own fine library, particularly topographical books. From Miss Shipman, niece of Mr. R. Clarke-Edwards [*F.*], we have had a hundred or so books, some of which will go to add to the Allied Societies' libraries but many of which are important additions to the central collection. From Mr. Henry Jones, father of the young genius Chester Jones, who died before his career had hardly begun, we have had an album of superb photographs of Mexican Renaissance churches and note books of Chester Jones's studies ; an invaluable source book for subsequent students. All these represent one side only of the library, but an important one, and a significant index of the library's growing prestige.

ARTS AND CRAFTS EXHIBITION

The Arts and Crafts Exhibition Society's Show at Burlington House is the best the Society has staged for many years. There are plenty of evidences that this distinguished body is becoming endued with new life and that there are many within its membership capable of making first-class contributions not only to the perfection of individual works of art, bindings, manuscripts, jewellery and the *objets d'art* of the future, but

to the improvement of industrial art. In the past the arts and crafts artist was too easily content in priding himself that his good works would have indirect influence on industrial art. That for instance the quality of commercial printing would be improved by the artistry and craftsmanship of the private presses or that elegant hand-made furniture at fabulous prices would change the quality of mass-produced tables and chairs. The change comes more from the enthusiastic entry of artists into the industrial field (if the industrialists will have them ; if they will not it is not always the industrialists' fault).

Edward Barnsley's furniture here has its excellent craftsman qualities enhanced in contrast with the no less excellent though utterly different qualities of Gordon Russell (R. D. Russell designed) wireless cabinets. The elegancies of private presses and sumptuous hand binding are contrasted with Pelican series illustrated books produced by the quarter million. The stylistic purities of " art needlework " are made to look prim and back-parlourish in contrast with the vigorous gaieties of Miss Crompton's needlework pictures. The show is cram full of good things which deserve attention from architects because these artists—like all artists who are awake to the modern idiom—have a real and valuable contribution to make to architecture. Art is not a detached special activity that can continue in cells. The architects can help themselves by using the enormous and mostly unused resources of the painters, sculptors, decorators, textile designers, and the rest.

Commonwealth Fellowships

We have just received notice that applications for Commonwealth Fund Fellowships should be sent in by 1 February 1939. These Fellowships, which were founded in 1918 by Mrs. Stephen V. Harkness as a means of increasing Anglo-American amity, are open to British citizens and are tenable for two years. Twenty-four Ordinary Fellowships are given to men under thirty who must be graduates of a recognised British university, two Dominion Fellowships are given to men from the Dominions, five Service Fellowships to men serving under the British Government or the Governments of India or a Dominion or any Colony or Protectorate or mandated territory, and three Home Civil Service Fellowships to members of the Home Civil Service. The successful candidates receive emolument of approximately $3,000 a year, which is entirely adequate for every reasonable expense in the U.S.A. likely to be incurred by a student. There have been no fewer than fourteen Commonwealth Fellows in architectural studies since the Fellowships began. Naturally we wish to encourage members whose claims are worth consideration to put in applications. Applications must be made on the proper form, which can be obtained from the Secretary of the Trust, R. H. Simpson, Esq., 35 Portman Square, W.1.

The Rise and Fall of Building Costs

A member has sent us the following analysis of the rise and fall of building costs between 1930 and 1937, which has been based on figures which he obtained from the Building Industries National Council.

Rise and Fall of Building Costs during the period 1930-1937

Materials		Labour Wages	
Date	Rise or Fall Datum 100	Date	Standard Rate Grade A Towns
			s. d.
1930	100	1.2.30	1 7
1931	96.4	1.2.31	1 6½
1932	94.5	1.2.32	1 6
1933	92.5	1.2.33	1 5½
1934	92.6	1.7.35	1 6
1935	93.7	1.1.36	1 6½
1936	96.7	1.2.37	1 7
1937	104.2	1.2.38	1 7½
1930-7	% of rise= 4.2%	1930-7	% of rise= 2.6%
1933-7	Do. =12.7%	1933-7	Do. =11.5%

London, within 12 mile radius, wage rates 1½d. above standard rate.

London, between 12 and 15 miles radius, wage rates 1d. above standard rate.

Percentage of Rise in Total Cost of Job

Approx. Materials	Labour		Rise
60% & 40%	all nearly equal	1930-37=	4%
55% & 45%			
50% & 50%		1933-37=	12½%
65% & 35% (normal proportion 1900)	1930-37=3.7%	1933-37=	12%

Information as to rates, etc., above, obtained from Building Industries National Council. Welbeck 3335.

Note.—Percentage of Materials and Labour will vary in special works.

Advance Proofs of Sessional Papers

Members are reminded that advance proofs of sessional papers can be had (if the already harassed paper-readers let us have their MSS. in time) by those who wish to take part in the discussions. Of course no guarantee is given that there will be time at sessional meetings for all would-be contributors to join in, but it is hoped that those who are qualified to make contributions will be enabled to increase the value of them now that they have a chance of studying the author's argument in advance.

THE INAUGURAL ADDRESS

BY THE PRESIDENT, MR. H. S. GOODHART-RENDEL, F.R.I.B.A.

READ BEFORE THE ROYAL INSTITUTE OF BRITISH ARCHITECTS ON MONDAY, 7 NOVEMBER 1938

At this time last year the address I made from this platform inaugurated not only the Institute's session, but also my term of presidency. This year my address inaugurates a session only, and must therefore be differently composed. I must speak in it of the immediate past as well as of the future, since for that past I have some responsibility. Also, when speaking of the future, I must remember that the responsibility I still have will rest soon upon other shoulders.

For the architectural profession the most important recent event has been the passage of the Registration Act, an Act which, while primarily protecting the public, protects also—and must eventually heighten—the esteem in which our calling is held. I do not suppose that anybody not an architect can know how long and painful the struggle for this benefit has been, nor how much is owing to the devotion of those whose efforts have secured it. Architects, however, know these things well, and are deeply grateful to all both within and without the profession who have laboured in the cause.

We have another reason for thankfulness in the official welcome given to our services in the present national emergency. The systematisation of structural precautions against air raids has been largely in our hands ; and the conference held here some months ago has been the most important step yet taken toward that goal. The delays that have occurred in making information accessible have certainly not been the fault of the Institute. In other architectural work needed for defence the Institute has arrived at a most satisfactory understanding with some of the departments responsible, an understanding by means of which outside architects can share—and indeed are already sharing —the burden of an unprecedented amount of urgent departmental work. If a crisis like that of a month ago should shortly recur, it will find the Institute already in touch with those who will command its activities, and well organised to take its part. A register of all our members is being prepared—a sort of detailed catalogue of our resources in men and special aptitudes. We also have a committee to advise all those who are in doubt as to the form their patriotic services can most usefully take.

In all those extraordinary activities the Institute is being served by its members with a zeal beyond all praise. There is, however, one ordinary activity from which we must take care that no zeal is with-

drawn. The money needed to supply the normal demands made upon the Architects' Benevolent Society, year in and year out, is not as easy to come by as it should be. Yet those normal demands would not abate in any calamity, but would rather become intensified ; and to meet them as they now are is a necessary part of our preparedness. I therefore take this opportunity of begging, in parenthesis, for the Society, and suggest that there could be no better way of expressing approval of the Institute's efforts to be worthy of our profession in emergency than that of sending some extra contribution to the Society's funds.

A complete chronicle of the Institute's year appears annually in its report, and there is no need to single out for mention to-night any one of our purely domestic affairs. From among the architectural output of the year, however, I may mention particularly the Glasgow Exhibition, not so much for the intrinsic excellence of its lay-out and of many of its buildings as for the lesson it teaches that good architecture pays. We believe that this lesson has been well digested by those in control of our national representation at the forthcoming great exhibition in America.

Nevertheless, good as the buildings were at Glasgow, good as they promise to be at New York, we could wish that the designs for both had been the subjects of open competition. The year of presidency that I have already enjoyed has shown me more plainly than ever before both the necessity and the difficulty of the Institute's policy of urging that open competitions be held upon all important occasions. Its difficulty is sometimes real, and whether real or not is always feared and exaggerated by the timid layman who hopes for little better in his architect than a man of whom he already knows the worst. Its necessity is perceived only by those to whom the constant advancement of our architecture is an obligation due to our national pride.

What the timid layman would really like best would be to go into a shop full of buildings, as he goes into a shop full of furniture, to buy one, and to have it re-erected by the man who for many years has served him well in looking after his drains and small repairs. He would then have chosen the building he fancied and the man he trusted, and need fear no unexpected result. If he were a regular, rather than an occasional builder, he would like to have at his hand some trusty designers so well trained in his preferences that he could safely leave them to themselves.

Now is not all this very natural? Quite good buildings are already mass-produced by routine, and it may not be long before quite good mass-products can be ordered from the architectural departments of big shops. It is not impossible that such mass-production may eventually absorb the major part of our country's architectural activity, and it will then be the duty of this Institute, even more than it is at present, to mould such mass-production into elasticity and to make it, as far as we can, accessible by new ideas. When that state of things is in being it may be hard indeed to persuade our timid layman that it is his duty to plunge into the unknown by promoting an open competition. At present, however, we can assure him that the dangers he fears are less than those of which he is unconscious ; we can warn him that the safe man among architects is as often as not the tired man ; that the building he likes and wishes to reproduce may be out of date before his reproduction is finished, and that if he tries his hand at home architecture with his trusty man of drains, he is laying himself open to unforeseen perils as real as those of home carpentry and home medicine.

I make no apology for preaching at all seasons and in all places the Institute's gospel of competitions because I think that a great many people, while believing it, do not realise its paramount importance. The days of enlightened patronage are almost over, and the number of laymen that can pick a good architect is as small as the number of those that can pick a good portrait-painter. On the one hand, you have a body of employers that normally go for their architecture to the men they like meeting at golf-clubs or at city dinners ; on the other, you have a body of brilliant young men who are mostly better at architecture than at " mixing " or feasting. The work produced by the good mixers and the good feasters may often be all that its occasion requires, but it is fairly certain to miss opportunities that for the general good of architecture ought to be taken. Now, the competition, as things are, is the only door that can always be kept open to the unknown man who has something to give that the world of architecture needs. If we wish our art not to degenerate into a genteel branch of commerce we must see that this door stands wide.

Architecture cannot thrive without a constant supply of ideas, and the most fertile ideas will often be found in the heads of young and unknown men. Architectural ideas cannot be materialised—cannot be fully born without opportunities, and I think the Institute ought to be a sort of Queen Charlotte's

Hospital for providing what is necessary for their delivery. As is generally known, the President of the Institute is sometimes asked to nominate architects for particular undertakings, and occasionally is able within the limits of his knowledge to tap new veins of ore, to point the way to unexploited talent. Almost always, however, he is asked not who would do the job best, but who has done most jobs of the same kind. I always wonder why architects are commonly supposed to be like the baker in *The Hunting of the Snark*, who " could only bake bride-cake," or the butcher who " could only kill beavers." In trade such specialisation is convenient ; it would, no doubt, be unreasonable to ask a greengrocer for a string of sausages, and I daresay that a good many commercial portrait-painters would run aground if they were to tackle seascapes. There are, moreover, some kinds of buildings in which specialised skill can only be acquired by experience, but they are not many. Nevertheless, it is often impossible to convince the authority wishing to build a branch library or a market that any architect can possibly do it who has not built many libraries or markets before. If such authorities only would hold a competition with a specialist as their assessor both they and he might learn a great deal.

A great deal has been said and written lately about architectural education, and a great deal probably remains to be said. My own opinions upon the subject are understood by some and mistrusted by many, and I shall not endanger the peace of this evening by reasserting them. I wish to point out, however, one grave defect for which our schools may be a little, and our Government is a great deal, to blame. The young English architect who distinguishes himself greatly at school, unlike the young French architect, does not thereby obtain any prospect of public employment. Our Rome scholars, our Soane medallists, cannot expect to be entrusted by their grateful country with the design of as much as a telephone kiosk.

This, I think, is really too bad ! Government does not always smile on competitions, and yet the one alternative way of picking young brains for the public good is never so much as thought of. The little blame that I will allow to our schools for this lies in the apathy with which the big distinctions are sometimes regarded, but, if those distinctions lead to no practical opportunities, it is quite understandable that a practical age should depreciate them. Seeing that the days of enlightened private patronage are inevitably passing, we are justified in expecting some approach towards enlightened public patronage from the State. It never pays a shopkeeper, in the long run, to neglect novelties in his stocktaking, and, if our national shopkeeping is to be as prosperous as we should like it to be, we must be able to put in the window public buildings as stimulating and inventively designed as the new Garde-Meuble in Paris, or the Stockholm Public Library. In the Glasgow Exhibition and in the contribution we are making to the New York Exhibition we have been fortunate, but we have no guarantee in our present policy that we shall be equally fortunate next time.

I imagine that in architecture the struggle of youthful inventiveness against entrenched mediocrity would cease at the moment good architecture became so desirable in the layman's eyes that he refused to put up with not-so-good architecture any longer. This happy state must be a long time coming if we are too difficult in our definition of what good architecture is. There is no need to wait until the public's power of discrimination becomes greater before we urge it to use fully the power of discrimination it already has. Inertia and indifference are more responsible for our inferior architecture than ignorance. There must be very few Londoners who do not feel faintly disgusted by the way in which their city is now being rebuilt, but no effective protest is made. Grumbling there is—yes—but peevish, ineffective grumbling that speculators can—and do —safely disregard.

Yet, perhaps, it is not fair to put our misfortunes down to public inertia, since a great deal of energetic protest is always roused by the proposal to destroy a building that in any sense is historic. The protests may not achieve very much, since a city is a place to live in rather than a history book, and historic buildings are often badly in the way of some imperative necessity. Nevertheless, the noise that is made about any unpopular act of destruction contrasts very curiously with the silence in which abominable acts of construction are received. If our darling old building is taken from us—boo hoo ! —we don't care twopence what they give us instead. No, I am afraid that our trouble is not inertia, but indifference. We value the historic associations of architecture, but we have not yet learnt as a nation to put much value upon architecture itself. On the other hand, if we are not yet eager for the best, our grumblings show that we are becoming impatient of the worst, and to all grumblers I wish to make a constructive suggestion. An architectural vigilance committee made up of competent persons outside the profession could do an enormous amount

of good by securing the early publication of designs for prominent buildings and their exposure to public criticism. Much of this criticism would, no doubt, be vexatious and ill-advised, but some of it would be valuable and all of it would be better heard early than late. Designs submitted in competition may be publicly exhibited as things are, but the excellent nineteenth-century practice of letting people know what was coming to them by means of published engravings has yielded in general to the photographing of what has already come, and is past all possibility of modification.

The only actual powers that such a committee would have would be that of calling attention to new projects, that of organising protests against what seemed to it undesirable, and that of inviting applause for good work that might not otherwise obtain recognition. By insisting that buildings seen by everybody are everybody's concern, it might overcome a great deal of our national apathy in matters of architecture, and might divert into more promising channels the fruitless energy of those who oppose inevitable change. I do not know whether or not architects could sit upon the committee without causing difficulty with the other architects whose work the committee might condemn, seeing that the essence of the committee's proceedings would be publicity, and its normal field of action would be the newspapers. Our Institute has always held that no professional etiquette should restrain an architect from offering criticism prompted by his conscience as a citizen—but there is such a thing as asking for trouble. Moreover, timidity does notoriously restrain us from calling attention to our brothers' misdoings even when it is in the public interest that they should be frustrated.

Against my proposal it can be urged that we already have a Fine Arts Commission, and in some places voluntary architectural panels. I say in reply that the Fine Arts Commission until recently has not been able to speak until it has been spoken to, and then only on great occasions. Architectural panels deal by their nature with much smaller matters than those I have in mind. My idea of a vigilance committee is one that would speak quite loudly when nobody had spoken to it at all, often, I hope, in praise as well as in blame. Architecture is not created for architects only, but for the public ; and the public ought to stir itself into some more useful activity than that of grumbling when it is too late for anything to be done.

It is not only in the prevention of eyesores that the public ought to exert itself, there is also much it should do to secure its own comfort as householders and workers. One of the main occupations of building speculators during the last decade has been the provision of slum housing for the well-to-do, and countless people, who could afford to keep servants but can't get them, have poured in from spacious Suburbia to the terrible zones of overcrowding in genteel London. In many a highly rented flat the inhabitant is less comfortable, being still animate, than he may hope to be in his equally spacious coffin, yet he submits in his thousands to being confined in it, with an electric refrigerator and a few other little gadgets to keep him quiet. I do not suggest that he should strike by refusing to live anywhere, because I believe that various less heroic courses are open to him. There are still places in London, accessible but unfashionable, where little houses and Victorian flats offer decent accommodation that would be within his means. There are not enough of these, no doubt, but they still exist. Furthermore, I should imagine that the building societies would gladly turn from the multiplication of Tudor homelets on arterial roads to the assistance of groups of five or six people who wished to have a block of flats built for their advantage and not for that of an intermediary speculator. These blocks would not be in Quality Close (late Cesspit Mews), Mayfair, but they would be in those often agreeable regions deserted by old gentility, which have not yet tempted the large speculator to make them uninhabitable. I feel sure that a group of really determined householders could find in such places sites whose value would be low enough to allow them to house themselves decently, for no more money than they pay at present.

Whether my particular ideas are practicable or not, I am certain of the practicability of my general proposal that the public should be helped by being taught to help itself. Architects are blamed for supplying the noxious products that people are content—even anxious—to buy, and, although this blame would be reasonable if architects were absolute, it is unfair to them in their present conditions of employment. The man who gambles in an undesirable patent medicine is much more the public enemy than the man who dispenses it, in most cases quite unsuspectingly. Architects regarded singly are men with their living to make, but collectively through this Institute and otherwise they may hope to be educators and in some degree reformers. I am convinced that the best approach they can make to reform will be by persuading the public to promote common welfare by means of common exertion.

VOTE OF THANKS

Mr. EWART G. CULPIN, M.T.P.I., J.P. [*F.*] : It is a very pleasurable duty which has been entrusted to me to-night, but I find myself in a dual capacity, and I do not know whether I am supposed to propose this vote of thanks to the President as a humble member of this Institute or as the Chairman of the London County Council. In any case, I do it in both capacities with a very full heart. We have all heard with great pleasure the charming address which our President has delivered. Speaking as Chairman of the London County Council, I have no hesitation whatever in proposing this vote of thanks, because we do realise the value of good architecture, and I think we may claim that the London County Council is setting an example of good work in the various buildings which it has erected in various parts of the county, and indeed outside the county.

Our President has touched upon many phases of our professional activities, and he has done it in such a charming way and with such humour that he has been able to drive in a number of points which sometimes do not get home by the mere logic of a speech. We are grateful to him for the points which he has brought to our notice to-night. We are all concerned about the future of this London of ours, and I think that we are all worried by many of the things that go up within the county, and still more by many of the things—most of the things—that go up outside, on the roads along which we have to travel when we go from London along any of the great highways of traffic. If our President has his way, perhaps some of those things will be remedied ; at any rate we hope so !

Speaking from my civic standpoint, and without wishing to trespass in any way upon the province of the President in a function which he is to perform later, I should like to say how much we who are interested in the government of London delight in the fact that the Institute to-night is doing honour to such a good friend of architecture as the Mayor of Westminster. I must not say more, because that is someone else's job ; but in the government of London there is no one who stands higher in civic esteem and in popular esteem than the Mayor of Westminster, Mr. Vanderpant. We in the Institute know of his good points, but we in County Hall know of the work which he has done, and one of his great works has been his co-operation in the bringing more closely together of the bodies in London who are engaged in local government. I think that we can claim that, largely as a result of his efforts, the relations between the county and the twenty-eight boroughs, and between those boroughs, the City of London and the City of Westminster, are now more cordial than they have ever been before ; and that is to the good of the whole of the county of London.

We listened a year ago to an inspiring address from our President, and to-night we have listened not only to an inspiriting address but to a challenging address. It is a particular challenge to those who are engaged in civic work and who have civic responsibilities, because the powers that are given under the Town and Country Planning Act for the control of elevations would, if wisely exercised, go a long way to remove many of those anomalies and those abominations to which the President has alluded. Unfortunately, it is not everywhere that advantage is taken of the provisions of that Act, and it is only in a few cases, perhaps where an architect is employed as a consultant, that we have the opportunity of refusing permission for the erection of things that are violating our countryside to-day. We hope that with increased knowledge, and with the propaganda that the Institute is enabled to put out, it may be possible to encourage those local authorities who are coming to the final stages of their schemes to see that when plans are sent in for any buildings they shall have proper architectural consideration, and I hope that in the future, when the buildings to which the President has alluded have fallen down—and from current observation it will not be very long before that happens in a good many cases—it will be possible to see that their place is taken by buildings which are architecturally good and will therefore make for the better enjoyment of those who have to live in them.

Time does not permit me to say more, but I have the greatest pleasure in proposing that the best thanks of this meeting be given to our President for his very interesting and charming address.

Mr. ALFRED C. BOSSOM, M.P. [*F.*] : If my old friend Mr. Culpin did not know why he was called upon to propose this vote of thanks, I can assure you that I certainly do not know why I have been asked to second it ; I have none of those distinctions which he possesses. I do, however, most enthusiastically endorse everything that he has said about the President. You ought to be very proud of your President. (Cries of "We are !") Good ; you should be. I wish that an exceedingly large public could have heard his address. It was so human and went so straight to the point.

You have heard a little from the President about registration, and he has spoken of the troubles experienced by those who endeavoured to bring it into law. There are one or two in this room who have experienced many sleepless nights over it—Sir Thomas Moore, Mr. Tatchell, Mr. Haynes and several others. We have it now, and I hope that soon we shall begin to experience the benefits of it. Registration has given architecture a status which it did not have before ; it is one of the recognised professions, and in my judg-

ment is one of the most important in the world. You cannot get away from architecture ; wherever you walk you see it and wherever you live you are in it. It is of vital importance that we have really satisfactory architecture.

For my part, I should like to see something which goes much farther than this registration of the name. I should like to see it made illegal for anyone to submit a set of plans to any authority for a permit unless signed by an architect. That time though is a long way off yet, and I think that we should be most injudicious if we attempted it too soon, but it is essential, and we must have it in time. It should be equally illegal to give the public bad architecture as it is to sell bad fish.

I am in entire agreement with the President's suggestion for a vigilance committee. I feel that such a committee could do exceedingly valuable work, but it would have to be very independent and very free and very brave, and it would have to be willing to irritate the public sufficiently to make the mass of our people determined to condemn bad work. It will require a great deal of public education before that stage is reached.

I should like here to issue a word of warning. I do not know how many in this room read the Home Secretary's statement last week that we may be having a great number of evacuation camps built in this country. There is one serious and important point there : they must be either good enough to keep or temporary enough to destroy themselves. We do not want this country to be smothered with a great number of evacuation camps of such a kind that we shall all regret it and people for the next hundred years will go on regretting it. It is a difficult situation, and I hope that the Institute will keep its eye on it and prevent our getting into a mess which can be avoided if we are careful.

I most emphatically endorse what the President has said about competitions. I am sure that in the countries where architecture is the leading national profession (which we are going to make it here) competition is respected much more than it is in this country. I know that in the United States of America, France, Sweden and elsewhere competition occupies an envied place, and I hope that we shall give it the same position here soon ; but I hope also that it will not be confined to the young men, but will bring into the open a good many of the old men who have not had a chance ; and there are a great many old men with plenty of brains ! Unfortunately, I myself do not practise any more ; my architectural life was given up to doing things and now in Parliament I have only the pleasure of talking about them.

I do consider that the Institute should take a very strong line also in the matter of architectural research. A little later this evening we are to have a charming little ceremony in which the Mayor of Westminster will take part. I wonder whether the Mayor realises that one of his foremen dustmen gets the same pay as the average professional man receives who is employed to-day to advise a county or other large area upon town planning ? That is something which we must not ignore ; it is a matter of decidedly serious import.

I sincerely hope that as time goes by the world will be able to continue to visit England and still see beautiful things that we all admire and not the ugly things from which we are too often made now to suffer—those " Tudor homelets " to which the President referred, and such like.

I am deeply proud to have the privilege of seconding this vote of thanks. The President, as Mr. Culpin truly said, has given us many sound, hard facts in a very charming wrapping. We must not, because he spoke in such a light and easy vein, forget that there was a great deal of sound logic outlined in his words. I hope that when we leave this room we shall continue to think about his address, and that if we can spread the gospel which he has given us we shall not omit to do so, in season and out of season.

(The vote of thanks was put by the Hon. Secretary and carried unanimously, with prolonged applause.)

The PRESIDENT : I think that my thanks for the thanks you have given to me should be short, as we have plenty of things to do this evening. I am very grateful for your endurance of my address, and I am very glad indeed that the content of it seems to be generally approved by you. Mr. Culpin said " if the President had his way," but what I mean is " if the public has its way." That was the burden of my address, that the public do not like the detestable things that are done, and that there is plenty of good feeling of which use can be made. The public education we talk of is already half done, and what is needed is to get the people who have been taught so far to do something about it and take some trouble. We must realise that we can do nothing when we are suspected of being " professional gents " with an axe to grind, working people up for our own ends into thinking that architecture is something they must have ; unless we can get the collaboration of the people who believe already, perhaps in rather a muddled way, that architecture is something which they must have.

One other point. One of the chief labours of my vigilance committee would be what I mentioned only among others, that of securing the early publication of important designs. If you look through old copies of the *Illustrated London News* you will see masses of little woodcuts of, say, the proposed corn exchange at Bootle. If Bootle then determined that it would not have it there was plenty of time to say so, but now poor Bootle does not know about it until it has got it. It is very important that people should know what is coming to them (perhaps not only in architecture but in life too !).

UNVEILING OF THE HEAD OF MR. H. S. E. VANDERPANT [*Hon. A.*]

Dora Gordine, Sculptor

The PRESIDENT : I come now to a very delightful duty. A few minutes ago I said that the days of enlightened patronage were passing, but our programme reminds me that I ought to have made that statement with reservations. One of the purposes for which we have come here to-night is to welcome a man who, although his modesty would recoil from the old-fashioned encomium " patron," is one of art's most valued benefactors. His generosity and his noble wish to commemorate a friend to whom he in his turn owed much have given us the Henry Florence Hall, which is the kernel of this building, and by this commemoration the name of Henry Florence is indelibly recorded in the annals of British architecture.

It is the desire of the Institute to commemorate the commemorator no less permanently by a noble work of sculpture portraying his features. When in half an hour or so we all go home, we may by mischance leave behind us a few handkerchiefs or bags which will probably be restored to us later. Some of Mr. Vanderpant will go home, but the rest of him will stay behind in bronze for as long as these walls shall stand to shelter him. Many men yet unborn will see his head constantly as they go about their daily avocations and will, we may be sure, honour the memory of one whom we now have the privilege of honouring in person.

They will also honour the work of a very distinguished sculptor, Miss Dora Gordine, whose reputation is known to all of you and whose exhibition now open at the Leicester Galleries cannot but confirm and strengthen the admiration already evoked by her works in the Tate Gallery. Apart from the great sculptural merit of this head, there is in it a very remarkable likeness to life, which you will shortly have the opportunity of judging for yourselves. To know Mr. Vanderpant is to feel oneself his friend, and the head with its charming suggestion of modesty and kindliness is, I think, just what his friends would wish it to be.

The President then unveiled the head, and continued : I am now going to presume on my position as President and trouble Mr. Vanderpant by asking him to say a few words.

Mr. H. S. E. VANDERPANT [*Hon.A.*] : I am asked to say a few words, but I thought that the main object of my being here was to let you judge whether Dora Gordine has done her work properly ! That I cannot judge, but I am told by your President that it is a speaking likeness.

I want to say that I am somewhat overcome by the attention, and to explain that when I first received the suggestion I hesitated to sit for this sculpture, but your Secretary, Sir Ian, said that it was the wish of the

Committee, and that it would be somewhat ungracious on my part not to consent. I should like to disclose another confidence. Somehow they obtained knowledge of this at the Westminster City Hall, and the doctor, a Scotsman, said that I should be very unwise and ungracious not to fall in with the wishes of the Institute.

Having said that, I should like to explain why I have done whatever I have been able to do for the Institute and for the Architects' Benevolent Fund. I came across Mr. Henry White about the year 1925, and he was very interested at that time in the Architects' Benevolent Society. I thought it would be very nice to found a Henry Florence annuity, because whatever I have I owe to Mr. Florence. I was his private secretary for twenty-five years, and when he passed away in 1916 he left me very well provided for. The annuity which I founded is, I think, £1 a week, and, little though it is, I believe that it is very much appreciated by the recipient.

Some years went by, a life fell in, and I became somewhat better off, so I came to see Sir Ian MacAlister

—he was not Sir Ian then—and said that I had it in mind to do something to perpetuate the memory of my benefactor, and I had thought of a bursary or scholarship. Sir Ian promised to think it over, and eventually he said that he thought a scholarship to study architecture in the neighbourhood of Greece would be very acceptable. Then, when I had agreed to that, in his charming way he said that you were going to have a new building, and that a donation to the fund for the purpose would be acceptable, and that if I gave such a donation the best room in the building would be named after Mr. Henry L. Florence. That obviously tempted me, and I agreed.

I do not think that there is much more that I can say, except that I appreciate very much the honour done me, and I think that if Mr. Florence were alive there is nothing that I have done since he died that would have given him greater pleasure than whatever I may have done for the Royal Institute of British Architects.

Miss DORA GORDINE : I know that you will not expect me to be an orator ; my mediums of expression, I hope, are bronze and stone ; but I do want to say how greatly I have enjoyed being here to-night and how grateful I am for all the kind things that have been said about my work. I feel very proud that I was selected as the artist to give you the permanent memorial of your friend and benefactor, and I am glad to think that the head will stand in this wonderful Henry Florence Hall, which is associated with the name of Mr. Vanderpant. I am happy that this commission gave me the chance of making a real friend, because it was wonderful to work with him, and it was wonderful to think that he will always be appreciated by everyone. Thank you very much.

PRESENTATION OF THE R.I.B.A. BRONZE MEDAL and DIPLOMA for 1937 TO MESSRS. ROBERT ATKINSON

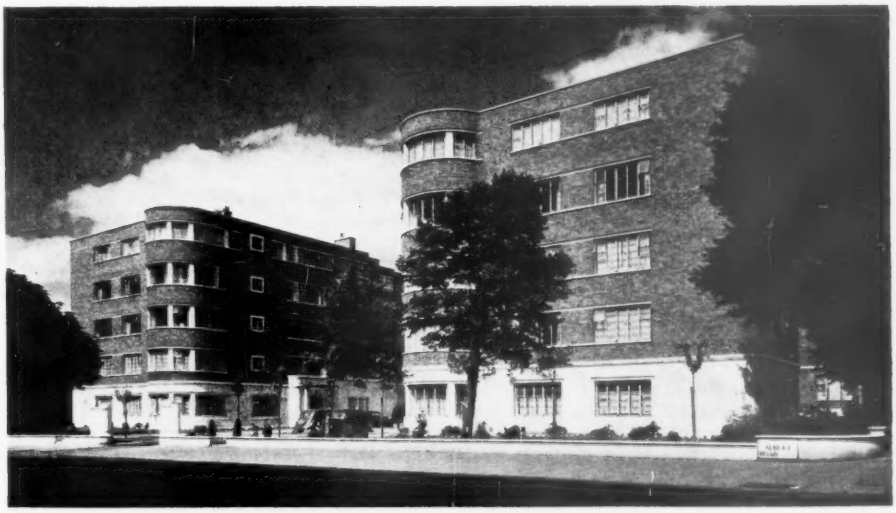
The PRESIDENT : I now have to present the Royal Institute of British Architects Bronze Medal and Diploma for 1937 to Messrs. Robert Atkinson—that is, to Mr. Robert Atkinson [*F.*] and Mr. A. F. B. Anderson [*F.*]—for Stockleigh Hall, a block of flats in Prince Albert Road, Regent's Park.* I think that, apart from our very great pleasure in giving this Medal where it is so well deserved, there is something in the award particularly appropriate to what I have just been talking about. Here is a block of flats, not built of very expensive materials, nor in conditions that have given any chance for exceptional display. Nevertheless, as we went round looking at different buildings that might qualify for the Medal, it gradually seemed, in its combination of all the qualities we thought it most desirable to seal with the Institute's approval, to tower higher and higher above its rivals. Very many people have seen it, and would, I believe, agree that its great merit lies in its simple but excellent detail, in the way it expresses its straightforward plan, and in its general modesty and appropriateness. Something which might have been just a dull building has been touched by that precious quality of art which comes in whatever is done by a real artist.

I do not think that I need say more, except that it is encouraging to think that there is almost always a chance of doing a thing like that if people will only take the chance and employ the right men. We are certain that Messrs. Atkinson and Anderson are very much the right men, and are very glad to show that certainty by making this award, which I know everyone will think is very well deserved.

* Until recently Albert Road.

Mr. ROBERT ATKINSON [*F.*] : It is a great honour to me and my partner to receive this award. I am sure that we hardly expected it, and in view of what the President said about "*noxious products*" and "*slum housing for the well-to-do*" it feels rather like a back-handed compliment ! We were fortunate in having two things which helped us very considerably : a very wonderful site overlooking Regent's Park and a client who was very receptive of our suggestions and very willing—which I think is very exceptional in this type of building—to allow us to do almost exactly as we liked. I believe that despite that it has been a financial success. I must admit that my own part in this building was comparatively slight ; the greater part of the burden was borne by my partner, Mr. Anderson, and with your permission I will ask him to take up this discourse.

Mr. A. F. B. ANDERSON [*F.*] : There is no need to describe the feeling of pleasure which I had when I learned that Stockleigh Hall was to receive this much-coveted award. I was very glad because I felt that all those who had worked so enthusiastically with us on the creation of this building would find in this recognition some fitting reward for their work. I think that it is probably a truism to-day that the architect is really dependent for the success of his building on the



spirit of team-work among all concerned. We are deeply sensible that we did enjoy this to the very utmost in Stockleigh Hall ; everyone gave of his best, from our excellent builders down to the ganger who was responsible for the road-work.

I should like to mention, however, a few people who were specially connected with this building—Mr. Hedley Carr and Mr. Woodhouse, who were on our office staff at the time ; Mr. Goulding, the clerk of the works, and Mr. Inglestone, the builders' general foreman, who so ably translated our plans into bricks and mortar. I also want to say a word about the authorities, because I know that the London County Council were confronted with very many difficulties in dealing with the consents for Stockleigh Hall, and I should particularly like to thank the officer who one day, when very dejected, told me that when he was dead the words " Stockleigh Hall " would be found engraved on his heart. I can only hope that he has derived some consolation from the singling out of this building for this honour.

My partner has mentioned the great debt that we owe to our clients, and I should only like to say that I greatly appreciated the warm appreciation which they showed for all our difficulties in building in London to-day and the helpful co-operation which we had from them at all times. Our President has spoken of the conditions which some people find who make their homes in flats, and my reaction was that we are fortunate in that the tenants of Stockleigh Hall took up their flats so promptly and were continuing to reside there. Mr. President, I am proud to have been associated with this building, which has been thought worthy of this honour, and I thank you very much.

Mr. M. I. TANCHAN (representing the owners of the building, Messrs. Stockleigh Hall Estates, Ltd.) : On behalf of my co-directors and myself, I should like to say that we feel very proud that the architects who designed Stockleigh Hall have been awarded the Bronze Medal of the Institute. We as the owners, as has been pointed out, had very little to say in the matter. Like the father whose child has won a prize in a beauty competition, we may be very essential to the whole scheme, but not very important ! There is always the thought, however, that had it been another father perhaps there would not have been a prize ! We feel deeply honoured, and I thank you very much.

Mr. W. E. COOPER (director of Messrs. W. F. Blay, Ltd., the contractors) : It is rather embarrassing for a mere contractor to come among this distinguished audience and talk about his work. After all, his work merely comes to this, that he is told to do something and he has to do it. At the same time, it has been a very great pleasure indeed for us to work with Messrs. Robert Atkinson, because they have been extremely helpful and in every little difficulty which has arisen, as they do in these contracts, have done their best to make things go smoothly. Mr. Anderson, with whom I came in contact throughout the work, has a very practical mind and was able to understand the difficulties of the contractors. It is a great honour to my firm to come here and accept your hospitality.

OPERATING THEATRES

PART II

By WILLIAM HUBERT EVANS

This article is a portion of a Thesis, submitted in the R.I.B.A. Final Examination, and which the Examiners recommended should be published. Part I, published in the last issue, dealt with the theatre itself, and its lighting, heating and ventilation. Part II, published in this issue, deals with interior finishings, accessories and fittings, and ancillary rooms of surgical suites. The Thesis is filed in the R.I.B.A. Reference Library.

INTERIOR FINISHINGS

Floors

Many floor finishes have been used in operating theatres, with varying degrees of success. The floor should have a smooth surface, easily cleaned, should be impervious to water and chemicals, should not be greatly affected by temperature changes, and not excessively costly. The earlier floors were mostly of wood blocks or flagstones. The former are unsuitable, owing to the large number of joints in which dirt can settle, the low resistance against absorption and staining, and their conduct under a large temperature range. The latter may be recommended, and are used considerably on the Continent, especially in Germany. They must be compact and perfectly smooth flagstones with the joints as narrow as possible in cement mortar. They are hardwearing, easy to clean, and unaffected by most chemicals. They have three drawbacks. Firstly, they give a cold, depressing air to the theatre ; secondly, they actually are cold to the feet ; and thirdly, since to be of any use they must be so carefully and accurately worked, they are very expensive. If they are used, a light brown colour is best if obtainable. They should be laid on an underflooring of sand or pumice concrete to improve the sound resistance if the theatre is on an upper floor of concrete construction.

The favourite floor finish to-day is terrazzo. This is not a new finish, as it was extensively used as far back as 1905. Marble terrazzo is best, although it is the most expensive kind. If the terrazzo is laid on a concrete floor the uneven expansion sometimes causes cracks in the terrazzo. This may be remedied by reinforcing the topmost layer of the concrete with expanded metal, or by dividing the terrazzo into panels separated by brass strips to localise any cracking which may occur. The latter is the best method, but if brass strips are used they should be earthed to a water supply pipe in order to prevent the possible explosion of anæsthetics due to static electricity. This also applies in anæsthetic rooms. However, a 60 per cent. relative humidity in the theatre will dissipate static changes. Repeated washing and subsequent oiling assists in preserving terrazzo floors.

In America, grey or green ceramic tiles made from felspar, clay and quartz are popular. The only objection to these is the large number of joints, although they can be made extremely fine with this type of tile. Another type of finish popular in America is cement treated with a patent non-dusting preparation. This has been used rarely in this country, but it seems to comply with the requirements, and is comparatively cheap. About 1918 a non-absorbent marble laid in large slabs was popular in the U.S.A., but this is affected by certain acids, expands considerably, is not hard-wearing and is expensive.

A recently introduced type of flooring that has been used in one or two theatres is composed of $\frac{3}{4}$ in. tiles of hard compressed asphalt laid on a $\frac{3}{8}$ in. bitumen underlay. The manufacturers make great claims for this material. It is said to be hard enough to withstand the weight of heavy articles without suffering from indentations, but soft enough to enable the joints to close up when the floor has been used a little, thus forming a virtually jointless floor. It is obtainable in black, grey, green or dark red, is polishable, impervious and easily cleaned, but has not yet had a chance of proving its suitability for use in operating theatres.

Another good type of flooring which complies with all the necessary conditions is "Biancola." It is a material resembling terrazzo, and is usually composed of marble aggregate, the material being much finer than is the case with terrazzo. It has the advantages of being denser and more impervious to dirt and liquids than ordinary terrazzo, and is capable of receiving a more highly polished finish. These advantages are, of course, partially offset by the increased cost. "Biancola" should be laid about $1\frac{1}{2}$ inches thick to avoid the cracks that often appear when the material is laid in thin layers.

"Biancola" has often been used successfully as a wall finish, and occasionally even for ceilings. This appears to be rather an extravagance, and can scarcely be recommended on account of the high cost. Nevertheless, a dado of "Biancola," forming a homogeneous mass with a floor of the same material via generous coves, forms an exceptionally neat and clean finish, fully providing for an easily maintained condition of asepsis. In cases where "Biancola" is used for dados, walls or ceilings, it need not, of course, be laid so thickly as when employed as a floor finish, owing to the fact

that it will not have to resist the same amount of wear and tear.

The desirability of drains in the floors of theatres is a much discussed point. About 1909 they were universally installed. The floor of the operating area had a slight incline towards a gutter at the side, with a gulley at one end. It seems rather undesirable to have an open drainage gulley in an operating theatre, as germs are apt to breed in the most frequently cleansed drains. Some authorities advocate drains nowadays; others are against them. An eminent Continental authority suggests: "One or two wastes away from the position of the operating table, the space for the latter being quite level. The waste should be fitted with a special trap which can be easily inspected and cleaned." On the other hand, a contemporary American architect says: "Surgical vacuum connections are necessary, but there is no necessity for a floor drain." Whether or not floor drains are necessary is a point which should be discussed with the chief surgeons using any particular theatre. It is claimed that a newly designed anti-odour trap, or floor syphon, is made so that it complies with the requirements of asepsis. The provision of a drain certainly ensures thorough cleansing of the floor, which can then be scrubbed daily with soft soap and water, and then flushed with water from a spraying appliance consisting of a hose with a spraying nozzle. All angles between floor and walls must be generously coved, the floor finish being taken up as a coved skirting.

A modern type of flooring which has been used in several English theatres is rubber. This has the advantages of being quiet, soft to the feet, and impervious to water. It is also obtainable in almost any colour. It is laid on a patent bituminous mastic. The drawbacks are two in number. Firstly, rubber is stained by certain chemicals likely to be used in an operating theatre. Secondly, although rubber resists water, it has been found impossible to make the joints lastingly watertight, especially at the junctions with wall coves. The water tends to get under the flooring, causing it to buckle and wrinkle. Manufacturers are working hard on this problem, and some claim to have solved it, which is a good thing, as rubber is a good flooring in other respects for use in operating theatres and appears likely to be the universal flooring for this purpose in the future.

Walls

As in the case of floors, the finish to wall surfaces has been and still is a very controversial subject. On the Continent and in America large glass slabs were used in the construction of both floors and walls as early as 1905. Difficulty was experienced with the jointing, as, if the joints were wide dust particles collected on them, and if they were very close the glass cracked with the variation of the temperatures. Glass tiles have also been tried, but the same difficulties apply in this case.

Marble slabs were also tried and these gave much better results than the glass, as they expanded much less, so that narrow joints were obtainable. This material has no serious drawbacks, but, for some reason, has never attained a great popularity, even in the U.S.A. where it was first tried. The reason is probably that it is considered to be too "decorative" for use in operating theatres, many persons deeming it more suitable for teashops. Naturally, no sane person would reject a perfectly sound material on the grounds of a psychological effect of this description, but, unfortunately, well-meaning hospital committees often seem to decide matters of this kind, despite the protests of architects and doctors. A marble which gets away from the "teashop" atmosphere, being comparatively inexpensive and otherwise suitable, is "Grey Tennessee," a simple close-grained marble with a low coefficient of expansion.

About 1906 highly glazed fireclay tiles were considered best for walls. These gave a smooth surface nearly as good as glass, but, as the tiles were less affected by temperature changes than glass, it was possible to have very narrow joints. This type of wall finish is still very popular. It suffers from a serious drawback. The glazed surfaces of the tiles are liable to develop crazing. For this reason a tile with a smooth but unglazed matt surface is more often used to-day.

A few years ago a new material was introduced which has been employed very successfully as a wall finish for operating theatres. It is in the form of large sheets of an opaque type of glass. These are secured to the wall in several alternative ways, the most usual being by chromium plated screws, stainless steel or chromium plated strips covering the joints and fixed by screws, or by means of a patent bituminous mastic supplied by the manufacturers. As previously stated, the old trouble with glass as a wall lining was the unequal expansion and contraction caused by the high temperature range prevailing in operating rooms. This difficulty has been largely overcome in the case of the new material. In the first place, the material itself undergoes patent processes during manufacture which render it less liable to excessive expansion and contraction. Even so, trouble is sometimes encountered if the screw method of fixing is employed. When metal cover strips are used the trouble is not so great, owing to the fact that a considerably wide joint between the sheets can be provided, to take up movement. The objections to this method of fixing are two: firstly, ledges and cracks are present between the metal strips and the glass which may harbour dirt, and secondly, the effect is rather unsightly and "teashop-like" for an operating theatre. The mastic method is probably the best. In this case blobs of mastic are provided behind each sheet, perhaps one at each corner and one in the centre. They adhere firmly both to the back of the glass and to the wall. The joints between the

sheets are also neatly pointed with the mastic. The secret of the success of this method is that the mastic, being of a bituminous nature, never sets quite hard, and is able to move with the glass as the latter slightly expands or contracts. The mastic is guaranteed never to lose its adhering powers, and also retains its power of altering shape as required. The mastic is not sticky, feels fairly hard to the touch, and may be washed, subjected to the effects of steam and most chemicals without fear. The materials and processes are marketed under patent trade names such as Vitrolite, Opalite, etc.

Many completely jointless finishes have been tried out. One of the most successful is one which was used quite widely as long ago as 1916. It consists of hard cement or "adamant" plaster coated with enamel. This forms a very good finish, easily cleaned, good-looking, not too expensive and easily re-surfaced when necessary. The plaster or cement work must be very carefully done by expert plasterers to eliminate cracking, which will almost certainly occur under such a large temperature range in any but the very best work. The surface of the wall must then be treated with special primers to ensure good non-peeling enamel work. This finish is enjoying a wide "comeback" to-day. Keenes' cement is generally used nowadays, with a cellulose type of enamel, as in the new theatres at St. Bartholomew's Hospital, London. It is also enjoying popularity in other countries, particularly the U.S.A.

One of the most modern finishes is known as "cement glaze." There are several proprietary brands made by reputable companies, chief of which are "Glazement" and "Xelite." It consists of a patent cement rendering, the surface of which has a high glaze when set. This glazed surface is produced by means of spraying the specially prepared surface of a fine Portland cement and sand rendering coat with a special type of paint. The cement becomes impregnated with paint to a depth of about $\frac{1}{16}$ inch, the finished surface being very durable and hygienic. This material has been subjected to vigorous tests at the Building Research Station and in the analytical laboratories of the London County Council, where it has been found to comply with all requirements. There is a comprehensive colour scheme to choose from, in fact, almost any colour, or its shade or tint, is obtainable.

Ceilings

The ceiling of an operating theatre should comply with several requirements. It should have a smooth, easily cleaned surface, which collects very little dust. It should not have a very reflective surface, because in cases where such materials as glass and "Vitrolite" have been employed a reflection of the operating table has sometimes been obtainable from outside the theatre, via the window. Many of the surfaces described in the section on "Wall Finishings" have also been used for ceilings, and the same advantages and disadvantages have been noted by the users.

Where hard cement or adamant plaster is used for the walls, it is obviously desirable to treat the ceiling in the same manner, the whole being painted with enamel. The angles between walls and ceiling should have a plain cove of generous radius, about three inches being suitable. If a cement glaze finish is employed, continuing the treatment over the ceiling is to be recommended.

Doors

Nowadays the doors to operating theatres are usually of the flush panel type, or, more commonly, of the solid core type covered with a veneer of wood or metal. They are generally finished in cellulose enamel to match the colour scheme of the theatre, although in cases where a metal veneer has been employed the metal has sometimes been left unpainted.

In 1909 some doors were made of iron to get a flush finish, as in those days flush wooden ones were rare. These were, of course, very heavy to operate, needed special fixing and were expensive. The main doors are usually provided with small sight windows, sometimes with flaps on the outside. Double doors are generally employed, to allow the easy passage of trolleys. They should be 4 ft. 7 in. in width and should be arranged to swing both ways and be self-closing.

The handles should be either stainless steel or some approved composition, such as "Doverite," preferably fixed on a 12 in. by 3 in. bevelled metal plate. The doors should be hung on two pairs of single-action spring hinges. They should be provided with a 6 in. mortice lock, and an 8 in. stainless steel flush lever slide action bolt into an oval floor socket. An 8 in. stainless steel kicking plate should be provided, extending across the full width of each door, and also a 7 in. trolley plate, the height of this being determined by the type of trolley used in each particular hospital.

Colour Schemes

The colour schemes adopted in operating theatres have seldom been thought to be of much importance until recently. Nowadays there is a tendency to make theatres look a little less formidable in appearance. White, owing to its clean appearance, is most popular, but is rather "hard" and disturbing to the eyes of the surgeon, besides giving an appearance of coldness. At the Friedrichstadt Municipal Hospital at Dresden some very original ideas have been incorporated in the colour schemes of the operating theatres. For two-thirds of their height the walls are covered in greenish-grey matt surface tiles, the upper one-third and the ceiling being finished in off-white enamel. The wall tiles have a decorative border of darker grey and green tiles. The flooring is of reddish-brown ceramic slabs, about 15 ins. square. The furniture in this theatre is painted a light grey colour, into which is mixed a little yellow. This harmonises well with the rest of the scheme, and makes the furniture show up clearly in artificial light, even small objects, such as footstools, appearing quite clearly. The linen used in this theatre

is blue in colour, instead of the usual white. It (including the gowns) is of cotton, and is of a light pastel shade, except the towels, which are dark blue. Unpolished instruments are used, and these are said to appear very clearly against the blue background, without dazzling in strong light. This scheme is rather revolutionary and may be universal some day, but would probably shock the majority of surgeons as yet.

At any rate, pale greens, blues and reddish colours are definitely preferable to the usual white tiles, being rather more friendly, and less trying to the eyes. In a theatre having walls and ceiling covered in pale sea-green Vitrolite, the staff now consider it preferable to schemes where white predominates. Therefore, it should be remembered that a little thought given to the colour schemes of an operating theatre may considerably help to brighten the outlook of depressed nurses and others who work in it, thereby lightening a task which few people would describe as being really pleasant.

Summary

Since they have no very serious drawbacks, other than high price, accurately worked York flagstones seem to be the best material for flooring operating theatres, but owing to their " cold " appearance, high price, and the fact that they do not blend very well with other materials, they are not very popular. Nevertheless they must be recommended, with worked coves of the same material.

Terrazzo, despite its popularity, is not by any means ideal, owing to the almost inevitable cracking, but, if this is overcome, the material has no serious drawbacks and must be recommended as second choice, " Biancola " to be preferred if finances permit.

The ceramic tiles so popular in the U.S.A. are good, and the best type of tile floor, as the joints can be formed so evenly and finely. These are probably third best.

Asphalt tiles and rubber both have great possibilities and are probably the types which will find most favour in the next few years, but cannot be unconditionally recommended until their defects have been remedied and they have proved their durability.

In the case of wall finishings, the simplest method must also be called the best. This is the cellulose enamel sprayed finish on adamant plaster or Keenes' cement. The greatest point in its favour is the ease with which it is re-surfaced. Secondly, the close-grained Grey Tennessee marble, laid in large slabs, is to be recommended. Although it has not yet had a very long test, Vitrolite has proved very successful in the cases in which it has been employed, and can be recommended.

With regard to ceilings, in some cases these are necessarily of glass, owing to the lighting being on the laylight system. If this does not apply the ceilings should be of the same materials as the walls, choice therefore being the same as the latter and in the same order.

The doors should be of the flush surface veneer type, cellulosed to harmonise with the colour scheme of the theatre. These are the only ones to be recommended, except for the metal faced ones, which are more expensive and no better.

ACCESSORIES

Supply Pedestals

The anæsthetic apparatus necessary in operating theatres has hitherto been a heterogeneous collection of gas cylinders, valves, tubes and the like, fixed to a stand made of light metal sections riveted or (latterly) welded together. In most cases this stand has been provided with wheels or castors to facilitate its movement either about the theatre or from one theatre to another. This paraphernalia has several drawbacks. The most important is that it hardly promotes asepsis, having so many nooks and crannies that its thorough cleansing is almost impossible. Also the gas cylinders have periodically to be replenished, necessitating not only the presence of a septic cylinder straight from a dirty factory via a dirty lorry, but also the presence of dirty spanners to undo the connections to the tubes. Naturally, this operation would not take place in the theatre itself, but, even so, the ingress of germs and dirt to the theatre is a certainty. Another aspect is that in cases where the patient is conscious when wheeled into the theatre, the appearance of such a formidable array, the purpose of which (to the uninitiated) is merely conjectural, may be calculated to produce an extremely disturbing effect upon the probably already overwrought nervous system of the unfortunate victim. This would be especially true in the cases of children or elderly patients.

Therefore, the advent of a fitment which adequately disposes of these difficulties is a matter of satisfaction to all those concerned. It first made its appearance in England about four years ago, in the large new operating suite at St. Bartholomew's Hospital, London, for which the architects were Messrs. Lanchester and Lodge [*FF.*].

It takes the form of a central pillar on the long axis of the theatre, near the head of the table, about 2 ft. square on plan, and 3 ft. 7 in. high, made of concrete covered with terrazzo. In the specific case mentioned above there are five large theatres built one upon the other. In the basement beneath the lowermost of these is a small room containing all the necessary gas cylinders, etc. A pipe is taken from each cylinder to the top of the suite, a branch pipe being provided at each floor level leading to the anæsthetic rooms, and another branch pipe to each theatre. A thoughtful point is that in each case a spare pipe is included to provide for any future gas which may be invented for anæsthetising purposes. To the theatres only are also taken air-pressure and suction pipes from pumps pro-

vided in the basement. Each pipe is painted a distinctive colour at each end, to minimise the possibility of wrong connections with their probably disastrous results.

The pipes to the theatres are taken in the thickness of the floor to the central pedestal, whence the gases can be administered via short and unobtrusive flexible tubes. The pedestals also contain the electric switches for light and power, an electric transformer for headlights, diathermy and cautery, and bottle racks for the use of the anæsthetist. This removes the annoying and ever-dangerous presence of electric wires running across the floor from wall plugs to the table and also the presence of a special table for the anæsthetist's bottles.

Cupboard for Pathological Specimens

In operating theatres at hospitals where there is a school for students of surgery, it is often desirable to have any pathological specimens which may be removed at operations transferred to the dissecting room or lecture-hall as quickly as possible, before any chemical or physical changes can take place to mar their instructive value. It is obviously undesirable to have people entering and leaving the theatre to collect specimens during the course of an operation, and this difficulty may be overcome by providing a specimen cupboard built into the wall between the theatre and the anæsthetic room, and accessible from either. If it is impossible to arrange for the cupboard to open into the anæsthetic room, it may possibly be arranged for it to lead into a small cabinet about the size of a telephone kiosk, but it should certainly not open directly into a corridor or theatre lobby, as any gruesome specimens might then be seen by patients or other unauthorised persons, which would definitely be undesirable. The cupboard should have a removable shelf of plate glass or stainless metal, the sides and top being covered in similar materials but not removable. The cupboard should be about 4 ft. 6 in. from the floor, but its size will vary according to the type of operation performed in a particular theatre.

If the wall is a thick one, it may be possible to keep both doors flush with the wall face, but in the case of a thin partition it would be necessary to extend it on the anæsthetic room side, leaving the operating side flush in any case. The best type of door for the operating theatre side is one of stainless metal, having a plain pull handle and no latch, but fitted with a small self-closing check action spring device inside the cupboard, preferably at the top, to be away from the contents of the shelf. The door may be provided with a glass window, through which those inside the theatre can see whether the specimen has been removed before introducing another. The door leading into the anæsthetic room should be similar, or it may be enamelled to save cost, or even entirely of glass, but, whichever type is used, there is no great need to avoid projecting latches or locks on this side.

Clocks

A clock is not essential in an operating theatre, but it is a very useful accessory. If one is provided it should be preferably of the synchronised electric type, which requires no winding. The face should be recessed in the wall, and covered with glass fixed flush with the wall face, the joint being covered by a plain ring of stainless steel with rounded edges. If an ordinary clock is provided, it should be fixed in an opening passing right through the wall, if possible, so that it can be wound up from the entrance lobby or anæsthetic room, the face being flush as before and fixed shut.

Blanket Warmer

This takes the form of a fairly deep cupboard adjoining the theatre. It is often located in the recovery room if one is provided. It should be provided with a non-warping door, owing to the heat generated within. The blanket warmer should be completely lined with light galvanised iron, which becomes heated and evenly distributes the heat to the blankets, which should rest on shelves formed of 1½ in. diamond mesh wire. The heat is supplied by a small radiator, a pipe coil, or an electric heater situated at the bottom of the cupboard.

Instrument Cabinets

The instrument cabinet is often installed in the theatre itself, but this is undesirable and unnecessary. It should be in the corridor of the surgical suite, or preferably in the separate instrument room, where it can be easily accessible without occupying valuable space in the theatre which may be put to a better use. It may be either free-standing or built-in, preferably the latter, and is usually made of stainless steel covered in baked enamel. It may be fitted with doors having glass fronts, the shelves being of plate glass, stainless metal, or enamel finish. The cabinet should be air-tight and located away from steam. It should be provided with a small tray for calcium chloride, and a drawer with a lock. There should be different keys to each lock and a master key.

X-Ray Viewing Panels

In all modern theatres X-Ray viewing panels are provided. They resemble picture frames, having a glass front and a chromium plated or stainless steel surround. The glass and frame are fitted flush with the wall finish to avoid dust-gathering ledges. X-Ray photographs are inserted in the panels, so that the surgeon may readily consult them during the course of an operation, in many cases thus greatly simplifying his task. The negatives are introduced into the panels from the rear, the panels passing through the thickness of the wall into an adjoining room, usually the anæsthetic room. Electric lamps are provided behind the films, thus making them very clear to those in the theatre. The panels are usually purchased complete, and are inserted bodily into an aperture left in the wall. They are manufactured by many firms dealing in theatre fittings and equipment, and may have spaces for from one to six photographs.

SUMMARY

The supply pedestal forms a very useful addition to the modern operating theatre, and can be adapted in the great majority of cases. The room containing the source of supply need only be quite small, especially if there is only one theatre to supply. Its cost is not prohibitive, and its maintenance negligible, so that it is to be thoroughly recommended wherever circumstances permit its installation.

A cupboard for pathological specimens is a refinement thought by some to be in the nature of an unnecessary "gadget," but there is no doubt about its advantages, and it is to be recommended, especially in a large and busy teaching hospital.

A clock, provided it complies with the aforementioned requirements, is to be recommended.

Blanket warmers are very desirable, and should be of ample size according to the size of the surgical unit. They should be conveniently situated, and there should be one for each theatre if possible.

Instrument cabinets are essential, and are preferably located in a special instrument room, as described later.

X-Ray viewing panels are absolutely essential in the modern operating theatre.

PREPARATION AND RECOVERY ROOMS

PREPARATION ROOMS

The preparation room is the place adjoining the theatre in which the final preparation of the patient for the operation is carried out. The preparation of the actual parts upon which the operation is to be performed is usually carried out in the ward or patient's own room, as the case may be. This consists of the usual shaving, washing in surgical spirit, wrapping in sterilised towels, etc., also an injection to thicken the blood.

It is usually undesirable to administer the anæsthetic in the ward, unless it is one of the most modern types, such as Tribromethanol, Avertin or Evipan, which are administered by hypodermic injections.

It is also undesirable to give the anæsthetic in the theatre itself, as the sight of the apparatus, hooded figures and peculiar lighting is likely to cause shock to the patient, whose nerves are probably already overwrought.

Therefore a preparation or anæsthetic room is nearly always provided. In order not to affect the patient adversely, it should be quite an ordinary room. In the U.S.A. it is often made as similar as possible to a typical private ward.

The flooring may be of terrazzo to follow the floor of the theatre, or of hardwood blocks, or rubber, to give a comfortable and normal appearance. The walls and ceiling are preferably of hard plaster with hard gloss paint finish. Depressing colours should not be used, and the glazed white tiles which are usually associated with operating theatres in the mind of the lay person should be avoided.

The lighting should be provided by ordinary clean-type suspension globes, as employed in the wards. Heating is preferably by easily cleaned radiators, rayrads, or electric fires. If electric fires are used, they may either be behind metal panels, or exposed as in domestic use to increase the normal appearance of the room. The plenum type of system is quite unnecessary in most cases, but it is desirable to provide an exhaust grille, with a fan, to clear the room quickly of anæsthetic fumes.

A pair of doors, wide enough to allow the easy passage of a bed or trolley, should be provided between the preparation room and the theatre, in preference to the plain opening often employed, as, once the patient is inside the theatre, the anæsthetic room will not be used again until the next operation. At any rate it should be arranged that the patient is unable to see into the theatre.

The window should be of an ordinary steel-framed type, with horizontal centre-hung opening lights.

A lavatory basin is desirable, but the presence of sinks or sterilisers is usually unnecessary, although they are often installed.

The patient is generally put under the influence of the anæsthetic in the preparation room first. When he is unconscious he is wheeled into the theatre, and transferred to the operating table. More anæsthetic is then administered as necessary during the course of the operation. Thus supplies of anæsthetic are necessary both in the preparation room and in the operating theatre.

This may be arranged in three ways :

Firstly, by having two sets of anæsthetising apparatus. Secondly, by having a portable apparatus attached to a trolley, which may be wheeled from room to room as required. Thirdly, if a supply pedestal is used in the theatre, the necessary supply pipes must also be taken to the anæsthetic room.

The first method is extravagant and unnecessary, the second is the most usual, and the third is the best.

If a portable apparatus is employed, cupboards must be provided for the storage of it, in addition to general store cupboards.

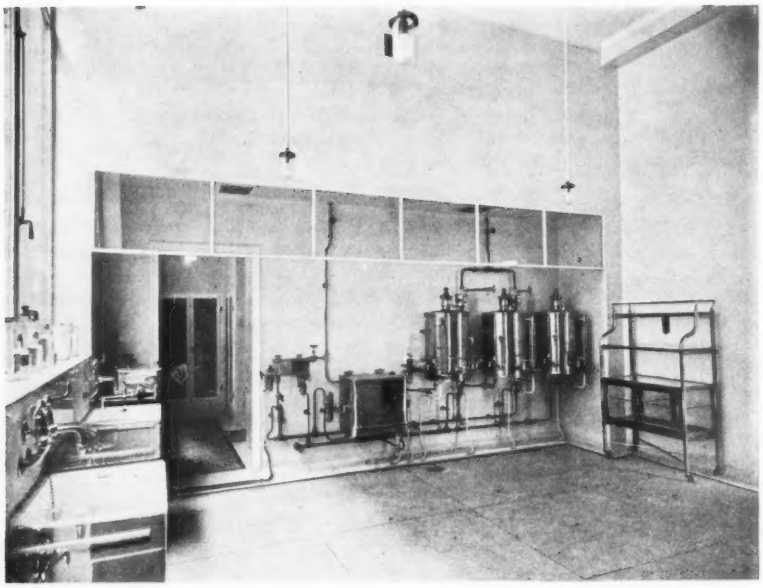
Telephones for internal and external use are also desirable in the preparation room.

RECOVERY ROOMS

These are sometimes provided nowadays, and are desirable in most cases if circumstances permit. They usually adjoin the theatre if possible, and are provided for two reasons :

Firstly, on recovering from the effects of an anæsthetic the patient is often unpleasantly delirious, and vomiting is common. These after-effects are rather unpleasant for the other occupants of the ward, and are best dealt with in a small separate room.

Secondly, the operating theatre is often some distance from the ward, and it is undesirable for the patient,



Sterilising room, St. Bartholomew's Hospital, London. By Lanchester and Lodge [*FF.*]

in the state of low resistance in which he is almost certain to be, to be taken a considerable distance along draughty corridors to a ward in which the atmosphere is probably considerably cooler than that in the theatre. The recovery room, on the other hand, may be kept at a temperature approximately midway between that in the theatre and that in the ward.

The recovery room should be quite an ordinary room, something like the preparation room, but should be provided with a sink as well as a lavatory basin.

STERILISING ROOMS AND STERILISERS

Sterilising rooms are nearly always next to the operating theatre, or between the two in the case of twin theatres, and should be of corresponding design and construction. Although, in a few hospitals, notably at St. Bartholomew's, London, the sterilising room is situated in the basement, electric lifts connect with the theatres, which are arranged one above the other, and the sterilised materials are conveyed in drums. The floor is usually of terrazzo, the walls having a tile dado about 6 ft. high, with the upper third and the ceiling in enamel on hard plaster. The room should be of ample dimensions, to avoid crowding the apparatus too closely together. Between 130 and 480 square feet is usual, according to the requirements of the hospital. The room should be directly accessible from the theatre via a plain wall-opening with no doors. There should be at least one large window, ceiling suspension globes for general artificial lighting, and a special lamp over the sterilisers in most cases. If gas or liquid fuels are employed, it may be necessary to take away any waste gases by means of a large metal valance or hood above the sterilisers, thence by a pipe to the open air, or a loft if one is provided. It is better to use earthenware pipes in the walls for this purpose, rather than exposed sheet-iron pipes. The sterilisers themselves should be provided with a condensing system to prevent steam escape.

Steam or electric sterilisers are in every way the most satisfactory and hygienic according to most authorities, and the sterilising room will obviously contain a number of these for various uses. The room should also contain tables on which may be placed instrument trays, basins, etc. These may be plated steel, or of enamelled metal with lava tops. There should also be two sinks provided with clear glass draining boards for the washing of used instruments. A thermostat cupboard should be provided in the sterilising room for storing infusion solutions and other liquids which must be kept at certain temperatures, such as the various physiological solutions. In many cases the linen warmer is also located here.

Instrument Sterilisers

These are used for sterilising the actual surgical instruments used in operations. They are not usually very large, and may be worked by live steam, electricity, coal gas, or one of several kinds of spirit. In most cases the sterilising is done by flowing steam, which may be at low, intermediate, or high pressure according

to conditions and requirements; but in some new hospitals the sterilising is performed by means of dry hot air. This system has been installed at Podesta Sanatorium, Buenos Aires; Pourtalès Hospital, Neuchâtel; and the University of Berne Surgical Clinic, to mention but three examples, and has been found very efficient in operation.

Silk Sterilisers

These sterilise the ligature silk used for stitching up wounds. The silk (or in some cases gut), is introduced into the steriliser wound around bobbins.

Glove Sterilisers

These sterilise the rubber gloves worn by the surgeon and assistants. The gloves are placed on special wire holders which fit into the fingers, in order to allow thorough sterilisation.

Utensils and Glassware Sterilisers

These are for the sterilisation of bowls and other utensils, and glass instruments such as syringes and catheters.

Surgical Dressings Sterilisers

These are the largest sterilisers, and superheated steam is often employed. They may be of the usual vertical cylinder type, but, when very large, are usually made horizontal, being known as :

Horizontal Autoclaves

These may be on stands, or built into the wall, the latter being better for the maintenance of asepsis. The autoclaves may be in the form of a cylinder or an oblong, according to the manufacture.

Physiological Solutions

The physiological solutions are actually introduced into the blood stream during certain operations. It is, therefore, obvious that these solutions must be completely sterilised, special sterilisers being installed for this purpose.

Water

Similarly, water used during operations is sterilised in a steriliser reserved for this purpose. Also, any washing done in the theatre itself is best carried out in sterilised water. Therefore, pipes are taken from the water sterilisers in the sterilising room to the surgical wash-basins. Hot and cold supplies are arranged, as in the case of an ordinary water supply to a basin. The sterilisers are arranged fairly high up from the floor, in order to obtain a reasonable pressure at the taps by means of gravity.

Distilling Plant

All water used in connection with operations, in the preparation of physiological solutions, swabbing, cleansing, etc., is distilled, whether or not it is subsequently sterilised. Many authorities find it more economical and convenient to instal their own distilling plant in the sterilising room rather than to obtain their supplies of distilled water from an outside source. This is not a cumbersome apparatus, and may be operated by steam, gas or electricity, whichever is employed for the sterilisers.

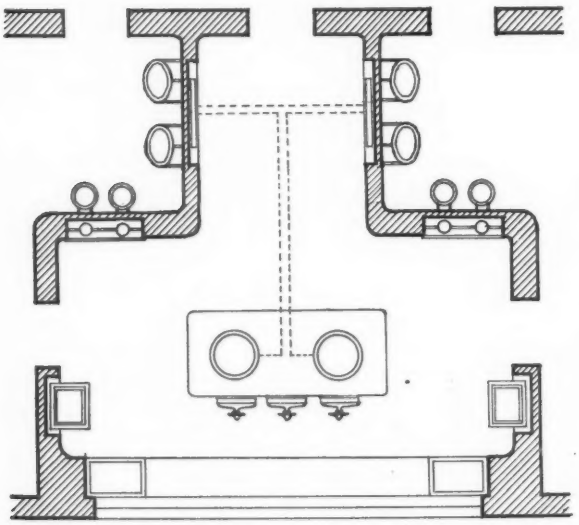
The amount of operating done in a particular theatre determines the size and number of sterilising apparatus necessary. It should be arranged that the necessary amount of sterilised materials required per day may be obtained in a single sterilising operation.

The most efficient heating system for sterilisers from technical and hygienic points of view is *saturated steam* at a pressure of from 0.5 to 3 atmospheres. The steam may be obtained from the main high pressure steam plant, or from a special generating unit. If the main steam supply is employed it may be necessary to reduce the pressure. This is done by an apparatus known as a *reducing valve*, which is situated either in the main boiler house or in the basement of the surgical block.

If no main steam is available the sterilisers may be heated from a special boiler which supplies steam to all the apparatus, or each piece of apparatus may be heated separately by electricity or gas.

The most practical method is to have a small steam boiler supplying all the apparatus, fired by gas. The boiler should, preferably, be located away from the sterilising room. This does away with dust-collecting waste flues, the air remains pure, and the apparatus does not become tarnished by the fumes.

Surgeons' washing space, St. Bartholomew's Hospital, London. By Lanchester and Lodge [*FF.*]



Sterilising room with a sterilising block in the centre. Probably the best type of partially built-in installation. Septic and asceptic theatres adjoin it on either side

Gas Sterilisers

Gas is always ready for use, requires no attendance, may be accurately regulated, requires no space for fuel, no removal of ash, and, if good burners are fitted, causes no smoke or soot. It is also inexpensive, the waste gases being utilised to heat economisers if desired.

Electric Sterilisers

These must be placed first from the hygienic point of view, but are more expensive than the gas type, both in initial cost and running.

Liquid Fuels

These include petrol, benzine and paraffin, all of which are dangerous in some degree (although various "safe" burners are now available), and should therefore only be used in cases where gas and electricity are not available, and where the installation of a steam generating plant is not justified.

Layout of Sterilisers

There are four main types of sterilising installations :

1. Open installations.
2. Portable installations.
3. Partially built-in installations.
4. Fully built-in installations.

1. Open Installations

Each unit is an independent element, which should be placed where it is most convenient and useful. The advantages of this type of arrangement are :

Firstly : each piece can be replaced by a larger and newer type as required, without disturbing the others.

Secondly : easy supervision. The disadvantage is that more cleaning and upkeep are necessary.

2. Portable Installations

The pieces of apparatus are, of course, of the open type, and are usually employed in cases where a permanent system is either impracticable or too costly. The system has an advantage in that it occupies very little space.

3. Partially Built-in Installations

This type also occupies little space. The pieces of apparatus are placed close together, or above each other, to form groups, which are then enclosed in a suitable structure which can be adapted to the general design and layout of the room. The sterilisers and pipes are arranged so that only the covers, doors, valve-handles and instruments project above the surface of the structure. All the other parts are covered, but are accessible via doors. The radiation of heat to the room is reduced to a minimum. The structure is sometimes of iron, supplied by the manufacturers of the sterilisers. This type is recommended, as it avoids costly structural work and provides a better arrangement of the sterilisers. The sterilisers for physiological solutions and water are usually placed on top of the structure, in the open, in order to provide a fall to the basins.

A new departure is to have a hollow concrete structure away from the wall, known as a *sterilising block*. This facilitates inspection and installation. The principal apparatus only is accommodated in the block, others, such as the instrument, utensil and ligature sterilisers, being in a counter, or on slabs or brackets near the openings to the theatres.

4. Fully Built-in Installations

In the case of partially built-in installations, the shape and size of the room determine the layout of the apparatus, but, in this case, the layout of the apparatus largely determines the shape and size of the room. Close collaboration between the architect and the manufacturer of the sterilisers is therefore essential right from the earliest stages. All the apparatus is built-in, and constitutes a composite unit with the room. Autoclaves, hot air sterilisers and the linen warmer are entirely recessed in a wall, only the doors, etc., being visible. The sterilisers for physiological solutions and water are usually in recesses at some height above the floor, being closed in by a panel or by glass doors. The instrument, utensil and ligature sterilisers are recessed in a counter which may be either between the sterilising room and the operating theatre or against one of the walls of the former. Only the lids, etc., are visible above the counter top, and if the first position is chosen a sliding window should be provided on the operating theatre side. If the second position is used,

a metal or glazed valance is often fitted above the counter to collect steam and fumes. It will be seen, then, that all pipes, cocks, steam traps, etc., appertaining to the main sterilisers are located in the space behind the wall, the regulating switches or valves being on an instrument panel adjacent to the steriliser doors. There are practically no parts exposed on which dust can collect, cleaning being thereby minimised. The heat given off to the room is small, as the hollow wall containing the units can be ventilated.

There are two main types of fully built-in installations, although there are also many types combining both, or derived from them. The two arrangements are :

1. A double wall is provided between the sterilising room and the operating theatre. The space between the walls contains the necessary steam pipes, etc., and is ventilated by an airway with intake and exhaust. The pieces of apparatus are arranged side by side, with doors beneath the fittings through which the pipes may be reached. The large autoclaves have two doors, one opening into the sterilising room, through which the materials are introduced, and the other opening into the theatre, through which the sterilised materials are extracted. Part of the structure, usually the middle portion, is in the form of a counter, across which the other sterilised materials are passed, a sliding window being provided on the theatre side. The necessary valves for operating the sterilisers are accommodated on the sterilising room side of the structure, on a suitable switchboard.

2. A wall is built across the sterilising room, dividing the latter into two parts. Two-thirds of the room so formed is used as the sterilising room proper, and the remaining third forms a lobby, entered from the corridor, and contains the pipes, etc. The larger apparatus only is situated in the wall, the instrument, utensil and ligature sterilisers being in counters, as previously described.

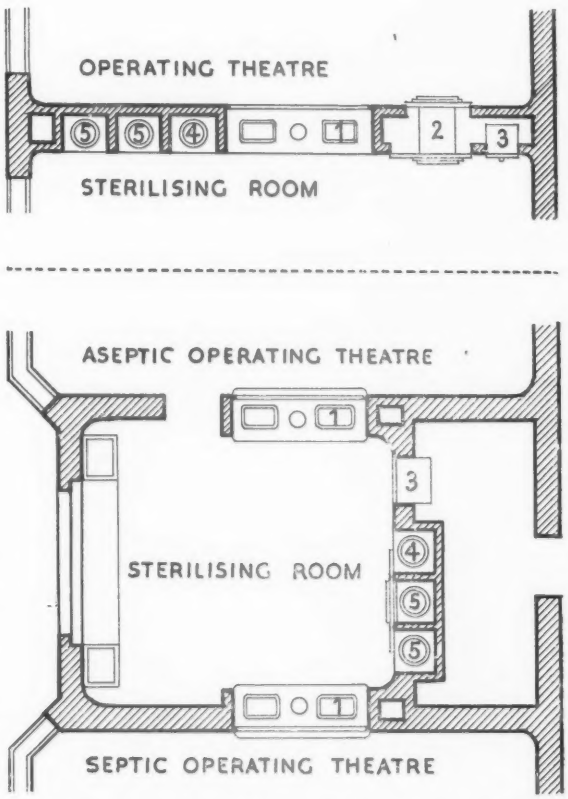
Both types of installation are shown in the diagram on this page.

Surgical Range

This is a proprietary brand of article, made by a famous firm of manufacturers of hospital equipment. It is on the " counter " principle, but does away with costly structural work. The plant is accommodated in a counter made of iron with a lacquered finish, which fits bodily into a space in the wall between the sterilising room and theatre. It is provided with double sliding windows, one on each side, and the space between them may be ventilated if necessary.

Summary

It is impossible to give any ideals on the subject of sterilising rooms and sterilisers, owing to the vast difference between the requirements of various hospitals, and the governing factor of cost. Ignoring the question of cost, and supposing that a full range of equipment is required for a large and busy hospital, one of the built-in methods of layout is to be recommended, on account of its hygienic qualities. For a smaller and less busy place, one of the semi-built-in types, especially the sterilising block, is to be preferred. As regards the type of sterilisers to be employed, the advantages and disadvantages of the several types have already been noted. All modern sterilisers are perfectly efficient, therefore the type used is governed only by circumstances and conditions prevailing for any particular job. In the planning of sterilising rooms it is absolutely essential that the architect works closely in conjunction with the doctor, the steriliser manufacturer, the treasurer, and the engineer. It is impossible for any one of these persons to say that " this or that type of steriliser is best," or " the plan of the sterilising room should be thus or thus," without having a knowledge of the views of all four others.



The two main types of fully built-in sterilising installations. Above : Installation erected in a double wall. Below : Ordinary wall in sterilising room with apparatus mounted at the rear

1. Counter (instrument, silk and utensil steriliser). 2. Autoclave. 3. Hot air steriliser with linen warmer below. 4. Solution steriliser. 5. Water sterilisers

ANCILLARY ROOMS

Instrument Rooms

In large surgical units a special room for the storage, polishing and overhauling of surgical instruments is very desirable and almost essential. In small units, containing only one theatre, it is quite in order to keep the instruments in a cabinet in the theatre lobby. The room should of course be near the theatres, adjoining the main one if possible. The instruments are kept in cabinets with dust-proof doors (which are fully described elsewhere). The room should be well heated to protect the instruments against oxidation, and should have a low atmospherical humidity. The cabinets are arranged round the walls of the room. In the centre should be a table and stools for instrument cleaning, etc. In many hospitals surgical dressings, silks, and spare gowns are also kept in the instrument room.

Surgeons' Changing Rooms

It is obviously very necessary for surgeons to take extremely strict measures with their personal cleanliness for the maintenance of asepsis. Whilst operating they wear sterilised gowns, caps, masks, gloves, and sometimes even special leggings and shoe coverings. Therefore it is usual to provide a small room in which the surgeons may robe prior to an operation, and disrobe afterwards. Despite the fact that they are almost completely covered by sterilised clothing, surgeons also make their hands scrupulously clean before operating, to make doubly sure of asepsis. After operating, their hands are likely to be somewhat soiled, and, in some cases, they may require a bath after spending several hours in the warm atmosphere of the theatre. Therefore, adjoining the changing room, it is necessary to provide a *surgeons' wash-up* or *scrub-up*.

The changing room should contain steel lockers in which clothes may be kept, and a substantial wall mirror. A w.c. and a shower should adjoin this room. The wash-up should contain surgeons' lavatory basins with elbow, foot, or knee-operated mixing taps. The wastes should also be knee or foot operated. In some cases it has been considered better to wash in running water. In these cases a slab of glazed ware is provided, attached by means of brackets to a suitable wall surface of glazed ware, tiles or terrazzo, and sloping downwards towards the wall. Elbow action taps are provided above this. Water runs down on to the sloping slab, whence it is diverted towards a channel in the floor. Basins should also be provided for the final washing in antiseptic solutions, which may either be "on tap" from the sterilising room or in three-gallon glass containers fitted over the basins. Sterilised water may also be used, and will be obtained from a source similar to that for antiseptic solutions. Surgeons' wash-ups are often designed so that the surgeons may see into the theatre while washing, in order to supervise preparations. This is done either by having the wash-basins in a recess directly adjoining the theatre, or by providing a partially glazed partition between the two rooms. The latter case is more aseptic, but the former has the advantage that the surgeons may communicate verbally with those preparing the theatre, instead of banging on the window and making strange signs.

Nurses' Changing Rooms

In large hospitals rooms are sometimes provided for the use of the nurses assisting at operations. These should have lockers, basins and a w.c., but showers are seldom considered necessary, any bathing being done in the nurses' quarters.

Dressers' Changing Rooms

These need only be provided in hospitals having a students' teaching section. Senior students are allowed to assist at operations, particularly with the dressings. Their changing room will vary in size according to requirements, but will be similar to that for the nurses, with the addition of a shower if no other bathing accommodation is available.

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ARCHITECTURE AND PEASANT LIFE IN CENTRAL EUROPE

By DONALD CRAIK [A.]

A wooden church in Transylvania

A hundred years ago the English village was a self-sufficient economic unit. In many cases farms in themselves produced the main necessities of life, food, a house and clothing, but when a small group of people lived together, one man became a butcher and another a cobbler. This benefited the community in that the work and produce was of a higher standard, and there was more time for leisure. During the nineteenth century, however, industry began to centralise until the village butcher and cobbler of to-day have become retailers of frozen meat and machine-made shoes.

I do not intend to investigate the new norms that have been produced by these changed conditions. It must be obvious that the villages in England at any rate have not benefited in the way they should from what has been called the "economy of plenty." What I want to give is a brief description of villages in central Europe where conditions are very much the same as they were, with the possible exception of elementary education, a hundred years ago. There the peasants still weave their clothes, make their bread and build their houses, and at the same time have a fine artistic tradition in costume design, dancing, theatre and building.

I was fortunate to be able recently to travel through villages in Northern Hungary, Slovakia and Rumania, staying with the peasants and hearing from them how they had been able to develop many of the customs of feudal times, which existed until after the war in most places. Many of the larger estates were then broken up, but the peasants, rather than returning to "strip farming," have preferred to work on communal lines and share out the harvest according to the amount of land each one owns. At sunrise a bugle is blown and the men and women who work in the fields set off. Meanwhile the cowherd and swineherd, who are paid by the community, collect and drive their animals up on to the common grazing land. In the evening it is a familiar sight to see a cloud of dust coming down the hill as the black swine stampede back and wait at their respective gates. The cows follow at a more leisurely pace.

The Hungarian village on or around the Puszta is extremely well-planned. The main street consists of a central way flanked with trees, and cobbled in the larger villages or towns. A small ditch takes the place of a gutter, and this is bridged at intervals to allow the carts to cross on to the wide pavements that form

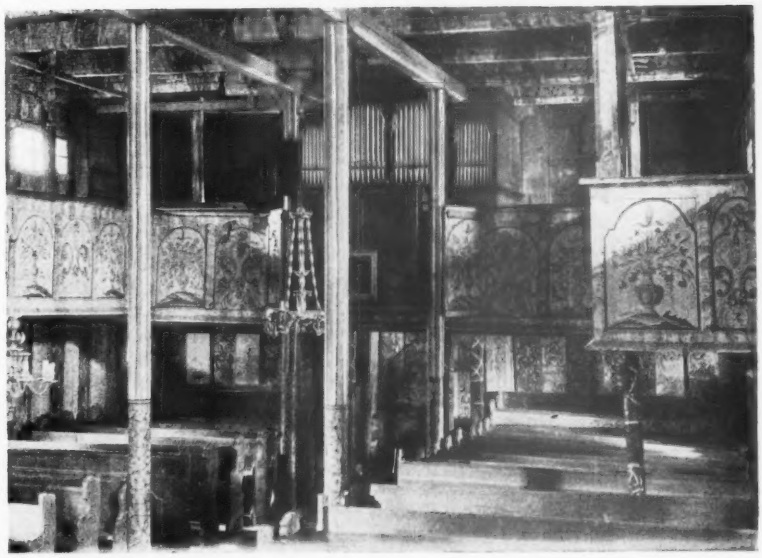
Lath and pisé gable in Hungary

a by-pass to the houses. These houses run back at right-angles to the street, and are separated from each other by their yards and usually only present a blank white-washed end wall to the street, except in the case of shops. Along the side of the house and facing the yard there is usually a verandah connecting the living with the animal quarters ; here the peasant hangs his maize to dry, and stands the large jars of gherkins soaked in salt water to pickle in the sun ; these form his main vegetable during the winter.

In the middle of the larger villages there is an open space corresponding to our village green, only dusty in summer and muddy for the rest of the year. It is used in turn for the weekly market, for the settling of disputes by the magistrate, and once a month a monotonous beat on a drum summons the villagers here to pay one-tenth of their produce as tithes instead of rent and taxes. Around this square are planted acacia trees, often in rows two or three deep, forming a welcome shade from the summer sun at midday for the men and animals.

Each village has its own church in a prominent position either in the centre or on an adjoining hill. The ones on the plain are usually of stucco with a Baroque flavour ; in the towns some of these are extremely beautiful, one of the finest being at Szekesfehervar, a town in Hungary. Many have gothic foundations, but the plain of Hungary has been the battlefield against the Turkish raids into Europe, and few buildings are left that are earlier than the 18th century. By far the most interesting village churches are the wooden ones in the mountains of Slovakia and Transylvania ; here hidden among the beech trees or on top of a small hill are some of the finest buildings ever made in wood. They date from the 17th century, and bear a resemblance to the wooden churches in Norway, but have a greater variety in design and are more imaginative in the use of their material. The ones on the plains often have the loveliest shingle spires, while in the wooded districts the main interest lies in the intimate approach up a winding path and in the details, such as the eaves. Inside the ceilings and walls are painted, sometimes rather boldly and crudely with scenes from the lives of the Saints, but more often in panels of delicately painted flowers in baskets and simple patterns on the wooden columns and ceilings ; one of the best examples of the latter type is at Lestiny, which lies to the north-east of Brno. Most of these churches are Roman Catholic, but at Clit in Rumania is an example of the wooden prototype of the Greek Orthodox church with a free-standing bell tower. As I travelled through the Carpathians I was fascinated by these churches. They have a quality that one only gets on seeing the best use made of materials and site combined with a poetic imagination.

The peasants usually help to build their own houses, the materials varying from white-washed pisé walls with thatched roofs on the plains to various forms of wooden houses with shingle roofs on the hills. Pisé, the stepsister of concrete, is not allowed by the health authorities in Budapest, since it harbours vermin, but the greater number of villages are built entirely of it. There is a general custom in all these countries for the peasants to burn their houses down and rebuild every 25 years, removing any wood or materials that can be re-used. This proves an excellent prophylactic, and there is also no sentimental value attached to the building. The house may consist of three or four rooms, a large kitchen serving as a living room, and one or two bedrooms, according to the size of the family. Adjoining are the quarters for the livestock, and beyond this the



Interior of the church at Lestiny

earth-closet. Building work starts by cutting and removing the turf from the site, and then a pile of stones is placed as the foundations at each corner. The remaining parts of the plinth are filled in later with loose stones which form an efficient method of ventilating the floor timbers.

The following are the usual ways of wall construction.

Wooden Houses

1.—Solid wood construction. The logs are planed on two opposite sides and then built up on each other, with either rebated or dove-tailed corners. The door and window openings are framed with two upright members.

2.—As a variation, straw may be laid in rolls between the logs, to act as plugging. On the inside the straw is separated and the wall plastered with pisé, and later white-washed. On the outside the straw shows as a roll.

3.—Wood frame, with short logs as infilling, usually plastered and white-washed on the inside ; sometimes shingle is hung on the outside, or else diagonal battens are nailed across and rendered with pisé.

4.—Wood frame, with vertical boarding. There will probably be an increase in this type of construction when the development of the timber industry produces a more plentiful supply of sawn wood.

Pisé Houses

Pisé is made from mud, dung and straw mixed together with water, and is built in blocks or bricks, or used with a reinforcement of laths, to form skins of a cavity wall. It is surprisingly strong and impervious to water when thoroughly dried.

Painted panel from the church at Lestiny

Left: Wood framed house in Hungary, with infilling of logs to the walls, and a shingle roof

Right: Wood framed house in Poland, with pisé infilling and straw thatched roof

1.—Wooden frame, with solid pisé block walls. This is rendered with pisé and white-washed.

2.—Wooden frame, with cavity infilled walls. Each skin is built up of vertical laths with lumps of wet pisé pressed against them. The cavity, which is 8 ins., is filled with straw and the outside surfaces are rendered with pisé and white-washed. Internal walls are built up in this way with one skin.

3.—Solid pisé brick walls, with wood linings for doors and windows.

Doors and windows are usually bought in the market and are made to definite standard sizes, so that houses can be built with unskilled labour; windows are all made with double leaves, one being removed in the summer. They are fitted in pisé which, in the case of wooden houses, is carried around to at least 8 ins. outside and is then painted; the blue and red bands forming a distinctive decoration.

Roofing materials are straw thatch in the plains, and shingle in the hills, with many local variations of pattern. Loft space is used for storage and is kept dry by the smoke from the fires, as it is common to find no chimney, its place being taken by several ventilation openings. Wide eaves form an additional protection to the walls from the sun and rain, and act as a covered way to the animal quarters.

While traditions of building and farming are admirable, the standard of living remains very low. There is a great shortage of money and therefore a lack of every amenity that the peasants cannot produce themselves. And although taxation is increasing they get very little back in the way of public works. It is true that facilities for education have increased in most towns, but it is difficult to see an improvement in the field of medicine. Child mortality is high, and epidemics of dysentery and other diseases are rife; there is a real shortage of doctors, and those who are in practice are hindered by the lack of transport facilities. I heard of villages up in the hills which had got so isolated, through epidemics wiping out the neighbouring villages, that they were not even marked on the maps of the country. Here conditions are appalling; the main diet of the peasants was a bread mixed with sawdust and a liberal supply of wood alcohol which sends the men blind at an early age.

Such examples are fortunately rare, but until means of communication are improved they will certainly exist. Fortunately all the countries are accelerating the construction of roads, and this will be the first stage in improving the conditions of the peasants.

INIGO JONES'S PRINCIPAL VISIT TO ITALY IN 1614

The Itinerary of His Journeys

By J. A. GOTCH [P.-P.]

After the marriage of Princess Elizabeth, the eldest daughter of King James I, to Frederick, Count Palatine of the Rhine, which took place on 14 February 1613, at London, the Earl and Countess of Arundel, with their suite, accompanied the bride and bridegroom to their home at Heidelberg. Here they stayed for a few days, and then pursued their journey to Italy, as they had intended. In their suite was Inigo Jones, of whom the Earl was a great friend and patron. They reached Milan on 11 July, and from there, it appears, most of the party returned home. Inigo Jones, however, was retained, as being likely to be of much assistance owing to his knowledge of the country and its language, for this was not the first visit he had paid to Italy. The Earl's party moved about Italy and went as far south as Rome and Naples. Jones was not with them all the time, and appears to have traversed Italy pretty much at his own will. The times of his visits to Rome and Naples coincided with those of the Arundels, but, although he gives many dates of his stay in various towns, he never mentions the Arundels in connection with them.

He took with him throughout his wanderings a copy of Palladio's *Four Books of Architecture*, which he had bought at Venice in 1601. He appears to have visited practically all the buildings illustrated by Palladio, and he filled the spare places in Palladio's text with notes upon what he saw. A fair number of these notes he dated, and we are thus able to follow him in his journeys with some accuracy, especially as these dates are supplemented by others in books which he bought and by those in the sketch-book that he carried with him. His Palladio became a sort of common-place book in which he made notes for many years after his Italian journey, as late indeed as 1639.

It will be not without interest to those who study his life to tabulate the dates in their due order, adding his remarks against which they appear.

Jones went to Italy in July 1613, and remained there until at least the end of August 1614, a period of more than a year. After this he returned, apparently through France, to London, where he added a few more remarks, in his Palladio, to those he had already made.

1613

February 14. Marriage of Princess Elizabeth.

July 11. The Earl and Countess of Arundel with their suite, including Inigo Jones, arrived at Milan.

Shortly after this Jones followed his own separate course, making no mention of the Arundels, although we know from other sources that he sometimes came in touch with them.

September 23. Jones was at Vicenza, some 115 miles east of Milan. His note begins :

Vicensa Mundaie ye 23 of September 1613.

It is interesting to see that he originally wrote "Thursdaie," but corrected it to "Mundaie," the reason being that according to the Old Style of dating, prevalent in England, the 23 September would have fallen on a Thursday, whereas according to the New Style, prevalent in Italy, where he had now arrived, it fell on a Monday.

After the date he adds a long description of the *Theater of Palladios*, and among his drawings is one of the Teatro Olympico in Vicenza designed by Palladio.

September 24 (Vicenza). *Conti Capra His hous half a mile from Vicensa. 24 Septem. 1613.*

All this house hath no cracke but stands fearme (with further notes).

1614

January 2. Jones was in Rome. His note is : *In the name of God Amen.*

The 2 of January 1614 new stille : I being in Roome compared thes desines following with the Ruines Them Sealves : Inigo Jones.

Then follows a list of 26 buildings, all temples, which Palladio describes in 26 consecutive chapters. Most of the temples were in or near Rome, the others being at Tivoli, Trevi, Assissi, Naples, Pola and Nimes.

January 5 (Rome). *This Tempell I sawe Sonday ye 5 of January* (Temple of Fortuna Virilis in Rome).

January 5 (Rome). *This tempel I sawe ye 5 of January 1614 and from ye Capills yt is covered with tilles* (Temple of Vesta at Rome).

January ye 5 1614 : Whilst I was in Roome the Pillors then stood of this Tempell was Pulled downe by Pau. V : to sett a figur on before St. Maria Maiore (Temple of "Nerva Traiano").

January 17 (Baia). *1614 Baia : 17 January likewise at ye Thearmi at Baia thear ar many Wales [walls] wth mor courses of Brick and some Great Bricke amongst.*

January 21. Jones was back in Rome. On the first page of his sketch-book, at "Roma," is the date :
Tusdai the 21 January 1614.
The manner of Drapery all antica.

February 20. He was still in Rome. In his sketch-book he writes :
20 Fevria : Of the Antiquites of Roome.

February 24. He continues the account of the Antiquities on *Monday ye 24 Febrary.*
After this he went to Naples.

March 8 (Naples). *Tempell of Castor and Pollax Napels. This tempell I sawe on Satterday the 8 of March 1614.*

March 23. *This I obsearved Sonday ye 23 March and indeed thes capitals are eexelent.*

May 1. He was still in Naples in May, for he bought a book in two volumes, describing the city, and in each volume he wrote the date and his name :
Napoli 1 Mayio 1614 : Inigo Jones.

May 31. He was back in Rome, for of the Pantheon he says :
This tempell I obsearved exactly ye last of Maye 1614 and have noated what I found more than is in Palladio.
He has added in darker ink *Pantheon (Ritonda).*
Palladio remarks as to the Pantheon that "Many will have it that the chapel in the middle over against the entry is not ancient." As to this, Jones observes :
Rome 1614 : This chapell must needs be anticke for yt accompaneth the chief enterance and I wonder there should bee any doubt made of it.
Of the Pantheon he further says :
Rome 1614 : This staire is as that of Capua but trianglle.
He also notes, of the Temple of Mars :
This tempel I obsearved being in Roome anno 1614.
Temple of Bramante. This tempietto I obsearved often being in Rome anno 1614.

June 13. Of the Temple of Vesta at Tivoli he notes :
1614 : This Tempell I sawe the 13 of June, and thear stands much of yt intire half the Portico the Volto of the Sill is gonn.

June 16 (Trevi). *Tem : Sotto Trevi* (below Trevi, which is some sixty miles north from Rome).
1614 : This Temple I sawe Munday ye 16 June and yt stands much intire ye Slates ar gone and ye Roofes of the lytell Porticcos on the sydes.

July 30 (Venice). From Trevi it would appear that Jones went on to Venice, for he dates a book : *Venetia 30 Juli 1614.*

August 1 (Venice). *Friday the first of August 1614 I spoake wth Scamozo in this matter and he hath resolved me in this in the manner of voltes.*

August 10 (Venice). *Sunday ye 10 Aug : I obsearved this buildin againe.*
A building illustrated by Palladio, who says : "This edifice . . . is at Venice."
A few days later Jones returned to Vicenza, which is about 40 miles west of Venice.

August 13 (Vicenza). *Visenza 13 of Agust 1614 : On the piaza over against ye Bassillica is the captaynes house and a great lodge.*
Then follows a short description.
Vicenca ye 13 August 1614 : Noat that theas to a all on but that on hath more sisto then the others.
Quinto 13 of Augst 1614 : This house is at Quinto in the Vissentin. The gentellman that owneth this house yoused me exiding kyndly and himself went with me all aboute.

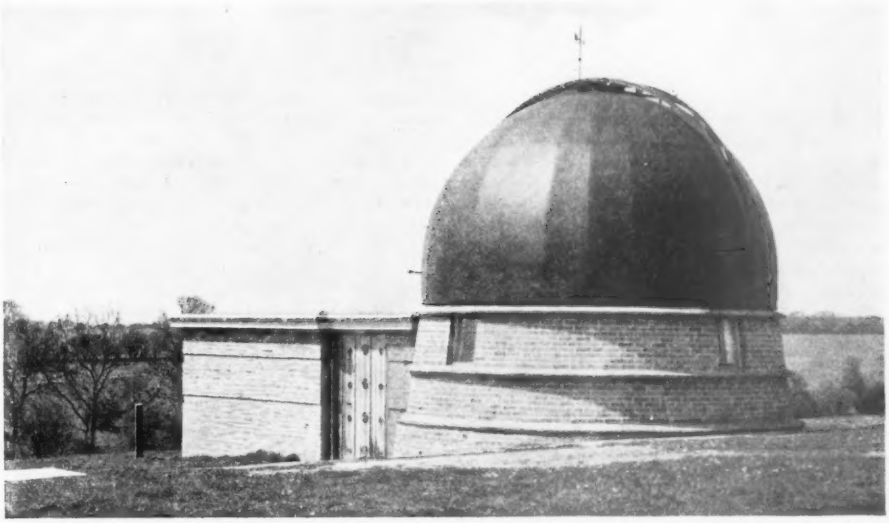
August 14. *Vicenza 14 August 1614 new stillo.*
This is written against a note relating to a "building at Vicenza belonging to Count Octaviano di Thieni."

It was probably at this time that Jones visited a dozen houses, illustrated by Palladio, in the district round Vicenza, but the only date he gives is that relating to Quinto 13 August 1614.

The 14 August is the latest date he gives during his stay in Italy, and we lose sight of him until he got back to London, unless we get a glimpse of him on his way back through France, at Arles and Nimes. Of Arles he merely says :
Of This kynd of freece I sawe at Arles in Province.
But of the two temples at Nimes, the *Maison Quarré*, and the other, which he inclines to think was dedicated to Diana, he makes so many notes that he must have stayed some considerable time at Nimes.

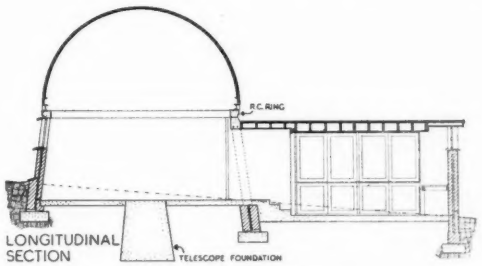
However, he eventually got back to London, and, from a note he then made, his journey was still uppermost in his mind, and we learn that he had been to Genoa. Being back in England he reverted to the Old Style of dating, for the 1614 of the note is actually 1615, or, as it would now be written, 1614-15. The note, referring to "loges," is as follows :—
London 18 Jan : 1614. At Genoa they youse most commonly to have 2 on at each end, and yt doth well for each apartment hath his logia to walk in ye morning or to make on roddy in ye summer, without trobling ye haalle, but on ye outside on is more gracefull farr bringing a frontispice in the midest wch is ye greatest ornament a house cann haave.

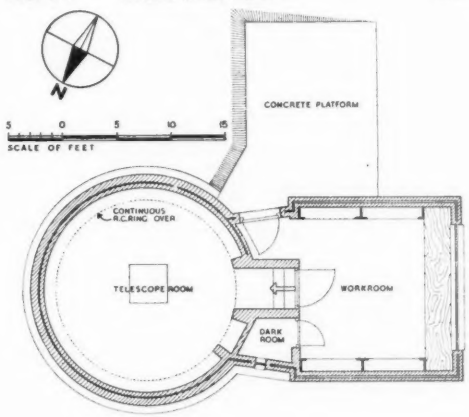
His Italian peregrinations ended at the close of 1614, but in later years he still added notes to those he made during his journeys. It will be understood that out of the hundreds, if not thousands, of notes which he made, only those above have been extracted which throw light on his itinerary.



MARLBOROUGH COLLEGE OBSERVATORY

By WILLIAM G. NEWTON AND PARTNERS [F.]





This observatory comprises a telescope room, workroom, darkroom and an external platform for telescopes. The copper dome over the telescope room came from another observatory, and the building had to be planned to take it, the walls which support it being battered in order to increase the floor space.

The battered walls are built up of two 4½-in. skins of brickwork separated by a 1-in. cavity filled with waterproof cement mortar. A continuous reinforced concrete ring transfers the weight of the dome to the walls. In order to lessen the amount of water running down the outside of the battered walls there are three drip courses of roofing tiles, which project approximately 6 ins. from the face of the wall; these are carried on an iron bar at the window heads. The other external walls are of 11-in. cavity brickwork, an ash-brown Devizes brick being used throughout. There is no plaster.

The flat roof to the workroom is of timber covered with a bituminous roofing material and asbestos tiles, and lined internally with wallboard. Windows are metal and the oak entrance door is decorated with bronze signs of the Zodiac by Esmond Burton.

Contractors and Suppliers

General contractors: Messrs. B. Hillier & Sons, Marlborough. Reinforced concrete structure: The Trussed Concrete Steel Co., Ltd., London. Steel windows: The Crittall Manufacturing Co., Ltd., London. Dismantling and re-erection of dome: Messrs. Willey & Co., Exeter. Dismantling and delivery of 10-in. telescope: Messrs. Symm & Co., Ltd., Oxford.

REVIEW OF CONSTRUCTION AND MATERIALS

This series is compiled from all sources contributing technical information of use to architects. These sources are principally the many research bodies, both official and industrial, individual experts and the R.I.B.A. Science Standing Committee. Every effort is made to ensure that the information given shall be as accurate and authoritative as possible. Questions are invited from readers on matters covered by this section; they should be addressed to the Technical Editor. The following are addresses and telephone numbers which are likely to be of use to those members seeking technical information. There are many other bodies dealing with specialised branches of research whose addresses can be obtained from the Technical Editor. We would remind readers that these bodies exist for the service of Architects and the Building Industry and are always pleased to answer enquiries.

The Director, The Building Research Station, Garston, Nr. Watford, Herts. Telegrams: "Research Phone Watford." Office hours, 9.30 to 5.30. Saturdays 9 to 12.30.

The Director, The Forest Products Research Laboratory, Princes Risborough, Bucks. Telephone: Princes Risborough 101. Telegrams: "Timberlab Princes Risborough." Office hours, 9.15 to 5.30. Saturdays 9.15 to 12.

The Director, The British Standards Institution, 28 Victoria Street, London, S.W.1. Telephone: Victoria 3127 and 3128. Telegrams: "Standards Sowest London." Office hours, 9.30 to 5. Saturdays 9.30 to 12.30.

The Technical Manager, The Building Centre, Ltd., 158 New Bond Street, London, W.1. Telephone: Regent 2701, 2705. Office hours, 10 to 6. Saturdays 10 to 1.

The Chief Technical Officer, The Building Centre (Scotland) Ltd., 425-7 Sauchiehall Street, Glasgow, C.2. Telephone: Douglas 0372-0373. Office hours, 9.30 to 6. Saturdays 9.30 to 1.

PANEL WARMING FOR HOSPITALS

Early last year the Departmental Committee on the Cost of Hospitals and other Public Buildings suggested in its report that the use of panels for heating was a comparatively recent development, and that, until further information about costs of operation and maintenance was available, radiators should be looked upon as standard practice. The Central Bureau of Hospital Information decided that this further information should be obtained forthwith, and, working in conjunction with the Invisible Panel Warming Association, they appointed Mr. Harold Temple to conduct a thorough investigation, the results of which have just been published.

For the purposes of the report forty-two representative hospitals were inspected, and in roughly half of these the invisible embedded panel system was used throughout the buildings, the remainder using it only in certain departments such as operating theatres or wards. All the systems have been installed during the last twelve years, and the work has been done by specialist contractors.

From the user's point of view the system seems to be popular. All the replies stated that the warmth was evenly distributed; only two suggested that the warmed spaces were not maintained at a comfortable temperature, and it was subsequently found that in one building there was not enough insulation on the flat roof, while in the other the fault was due to the room being situated at the extreme end of a direct gravity circulating system; forty-one replied that the absence of exposed pipes was a very real advantage, and all agreed that less cleaning was required, though often no actual saving could be shown, as the same number of cleaning staff was employed; nearly half the hospitals maintained that the cost of periodic redecoration was reduced, seventeen were either doubtful or had insufficient experience, the remaining seven replying "No" (three of these because the wards were closed at certain fixed intervals for redecorating).

Turning to the heating apparatus itself, it was found that no repairs of any kind have been necessary in any of the installations; in twenty-seven jobs the plaster was perfect, in eleven there were very faint, hardly visible cracks, while there were slight cracks in four; slight discoloration of the plaster was noticed on two jobs, though the plaster had not cracked, and on one job the discoloration was pronounced. This fact is particularly interesting since the average flow temperature to the panel circuits was 132 degs. F., some 12 degs. more than the maximum recommended by the Invisible Panel Warming Association. In one job the flow temperature had varied from 90 to 190, owing to inefficient stoking, but even here the condition of the ceiling was quite satisfactory in spite of the sudden and violent temperature variations.

Since one of the chief claims made for panel warming is that it gives a considerable saving in fuel costs, it is unfortunate that it was not possible to obtain any figures of the amount of fuel consumed. It is easy, however, to realise that, while hospitals naturally keep figures of the total amount of fuel consumed, the task of sub-dividing the figures into heating, hot water, laundry, sterilising, and all the many other necessary services involves so much labour that it can hardly be made a matter of standard hospital routine. While the report regrets the omission of costs, it concludes, quite fairly, that "tests on other buildings have shown substantial savings, and there appears to be no logical reason why in hospitals the same economy should not be secured."

For the patient there is one very important argument of which too little has been heard. Air currents are a definite factor in the transmission of infectious diseases, and where convection currents are absent the risk of infection is much reduced. Architects are all taught as students of the way in which air currents will carry the spores of *merulius lacrymans*, and the same reasoning of course applies to human diseases. That panel heating, with its absence of convection currents, may reduce the transmission of infection is a point brought out in a letter from a medical superintendent, published in an appendix to the report. The hospital to which he refers is planned on the pavilion system, two out of six pavilions being equipped with panels, and there has been "a marked decrease in the infectious disease incidence in the panel-heated villas.

I find that though I have isolated cases of infectious disease in these villas, the infection does not spread through the rest of the population with either the speed or the certainty it does in the radiator heated villas. . . . In the last epidemic of influenza I found isolated cases in the panel-heated villas, while in the others, which are equally warm, cases went down at the rate of eight or ten a day—the air-borne infection no doubt being helped by air currents."

This report is a most excellent and valuable piece of work, and it is encouraging to see that the producers and the consumers can co-operate in such a sensible way and produce results of real value. All that now remains is a little further work on fuel costs, and more observation on the transmission of infectious diseases. The data on panel warming and hospitals will then be quite complete, and an example to the rest of the building industry.

NEW B.S. SPECIFICATIONS

VERMILION AND RED PIGMENTS FOR PAINTS—NOS. 320-333.

ULTRAMARINE BLUE FOR PAINTS—NO. 314.

PRUSSIAN BLUE FOR PAINTS—NO. 283.

GREEN PIGMENTS FOR PAINTS—NOS. 303-318.

To have admired, to have even striven to produce colour schemes with a dominant pigment of which the Chinese made history before the foundation of Taoist mysticism, is one thing. To know that a glorious illuminant of celestial art is due to HgS is neither art nor romance. Vermilion for Paints should contain not less than 99 per cent. of mercuric sulphide. That condition alone makes B.S.S. No. 320 foolproof, although it does not make vermilion any easier to use or mix with other pigments. Not everybody can identify pure vermilion, and so many have debased it by chemical imitation and mis-application.

The foregoing Specification is accompanied by another dealing with Red Pigment for Paints. The value of the latter seems to depend on what is agreed between Purchaser and Vendor and, as far as I am able to judge, does not consist of determined formulæ for producing what "official taste" considers satisfactory for signals and pillar boxes. As for Vermilion Substitutes so dealt with, the implication of this specification is that a correct substitute exists for the real thing, always supposing that the purchaser knows it when he sees it.

Genuine ultramarine blue costs about one pound sterling per ounce, consisting of refined lapis lazuli. The commercial variety is entirely another composition which looks different and smells different, but it is a fairly sound and very useful pigment. In my opinion, the luminous quality of this pigment is entirely lost in oil or glossy paints, being at its best in distemper or flat drying mediums. B.S.S. establishes a highly desirable standard of quality in a pigment that has suffered much adulteration.

The name Prussian Blue implies a national discovery tha could be more truly described as Cyanogen Blue, and which owes its existence more than partly to British research. The chemical constituents expressed in B.S.S. No. 283 indicate an exacting standard of purity.

I have always disliked Brunswick or Chrome Greens as a matter of taste in proportion of prussian blue built on lead chromes which absorb the more transparent colouring of the former. Such pigments are a combination strictly covered by B.S.S. Nos. 303 and 283.

Green Oxide of Chromium is the true base of all shades and hues of genuine green. That it shall contain not less than 98 per cent. of oxide of chromium is a strict safeguard of purity, indicated under Composition in B.S.S. 318.

BRITISH STANDARD SPECIFICATION FOR PLAIN LINOLEUM AND CORK CARPET: NO. 810—OCTOBER 1938.

The history of linoleum products began during a period of social affluence and domestic drudgery, when "oil cloth" was a modern floor covering for kitchens, sculleries and water closets. It satisfied hidden purposes so profitably between Pimlico and Poplar that more agreeable possibilities of usage might never have been known in public rooms, shops, vestibules and the like, but for the incentive of later floor coverings of other and more mysterious composition. As a result of gradual improvements in quality, linoleum has become a satisfactory covering for almost any kind of floor where economical, hygienic and durable qualities allied to sociable appearance are desirable conditions of interior equipment and decoration.

A certain amount of linoleum is still produced in patterns probably inspired by an ancient commercial axiom that cheap things should look cheap, if not nasty, and of which recent examples imitate marble and other motives merely capable of obscuring the imprint of dirty footwear. Improvement is, perhaps, more determined in quality than design, but as linoleum is found suitable for lower decks of battleships as well as café table tops, it may be reckoned an extremely adaptable material indeed. I happen to have made use of linoleum as wall covering and decoration, besides laying it on café counters and sheathing doors that have to endure constant cleansing and violent wear and tear.

The British Standard Specification now issued for users of Plain Linoleum and Cork Carpet establishes exacting conditions of production, seasoning and testing such materials. The substance of this much-discussed specification is a credit to the industry and the committee who thus put an end to cheap and, consequently, inferior floor covering which once took the name of lino in vain.

There are still certain impediments to the use of linoleum which are not inherent to the material as such. These impediments are not uncommon to users who contemplate floor covering for domestic and public buildings, being associated with processes of laying and maintaining linoleum in all sorts of circumstances connected with building and furnishing operations. Many users remain uncertain of proper methods of preparation and installation of linoleum products on different types of foundations or sub-floors. So far as they may be concerned it is up to architects to give authentic direction for the laying of linoleum in all kinds of places and on all kinds of surfaces.

The contemporary practice of laying linoleum products in jointed or tile formation has delivered them from the ingenuity of makers of ready-made patterns, enabling architects and designers to exercise their own discretion in floor patterns and

to arrive at more complementary results of interior decoration as a whole. Such practice also appears to be more efficient than that of laying large sheets of floor covering at a time. The issue of a standard specification for Plain, not patterned, Linoleum is a significant tribute to intelligent application as well as production of a much used and, for many reasons, likeable floor covering.

OLIVER BERNARD [*L.*]

EXTERNAL RENDERED FINISHES

For some time it has been fairly widely known that the Building Research Station was conducting a large-scale investigation of current Continental methods of rendering. Brief reference was made to this in the last annual report of the Board, when one or two of the conclusions reached were roughly outlined, and when it was announced that a fuller report was in course of preparation. This report* has now been published. Since the conclusions reached were summarised in the Questions and Answers of a recent issue of this JOURNAL, no useful purpose would be served by a repetition of them here, but it is perhaps worth mentioning that the report is illustrated with a number of photographs to show the textures obtained, and that there is also a suggested specification for those who would like to make some tests with a cement-lime rendering. The report adds that since the materials and methods used are so different from those which are in common use in this country, it will obviously be unwise to use the specification in a job of any size until some test panels have been prepared and kept under observation for a time, but "the Building Research Station would be glad to receive reports on the results of any trials made on the basis of the specification."

PRIMING JOINERY

PRIMING JOINERY TIMBER. *By L. A. Jordan, D.Sc., A.R.C.Sc., F.I.C., and P. J. Gay, B.Sc. Twenty-sixth Bulletin of the Research Association of British Paint, Colour and Varnish Manufacturers.*

Priming joinery is a simple job requiring no particular skill, nor are the materials expensive. Yet paint on windows, doors, etc., is continually peeling, blistering, and the woodwork decomposed, simply because the priming has been scamped in some way or other. It should be enough to specify that such and such joinery shall be properly primed before it leaves the factory and be properly cared for whilst awaiting fixing and final finishes—but it isn't!

So at last Dr. Jordan and Mr. Gay have produced a joint essay on priming joinery to help those who are determined that such work shall be properly done, which essay is a searching commentary on the way such work is not unusually done. There is more reference to wood than might be expected in an essay on priming it and if one who is interested in both wood and paint may say so, the authors have confined their essay particularly to painting soft woods without actually saying so.

It always gets my goat when Douglas fir is described as "British Columbia Pine—widely distributed in Canada and the United States," because nomenclature of woods is about as mixed and muddled as that of paints. The brutal truth, in my opinion, is that soft woods are not ideal foundations for paint, hence their need for careful priming and finishing coats of paint. When the authors allude to "Wood adequately primed before shipment" much depends on the meaning of shipment, and their sense of humour will survive my remarking that separate pieces of wood cannot be primed before they are finally worked and fitted together. The latter suggestion might make joinery suffer more than paint does in many workshops already.

Nevertheless, this bulletin is quite up to the admirable standard of all such issued from the Paint Research Station at Teddington. It is an interesting and instructive reminder that wood is an organic, lively substance that is never really inert. Therefore, whoever tries to seal up its pores must be sure of its quality and condition, for when depriving wood of its natural surface ventilation it should be done thoroughly or not at all.

OLIVER BERNARD [*L.*]

THE SCOTTISH BUILDING CENTRE

The Building Centre (Scotland), Ltd., opened the doors of their new premises at 425-7 Sauchiehall Street, Glasgow, on 21 October. When the London Building Centre was started in 1932 there were many who expressed doubts as to the demand for its services. Such doubts now appear groundless since, quite apart from its own success, it has served as the prototype of Building Centres in Stockholm, Paris, Madrid (still operating), Zurich, Tel-Aviv, Johannesburg, Cape Town, and now in Glasgow.

As in the case of the other centres, architects are closely identified with the Scottish Building Centre, Colonel G. Gardner McLean [*L.*] being the Chairman of the Board and Mr. C. G. Soutar [*F.*] representing the Royal Incorporation of Architects in Scotland. It has opened with its exhibition space already three-quarters filled by more than 170 exhibitors. There are five floors of exhibition space, about equivalent in area to that with which the London Centre started. Of the firms exhibiting the majority appear to be either Scottish or from the North of England. This is to be expected, since most building material manufacturers have fairly well-defined fields of operation and there is little inducement for a South of England firm to compete with similar firms on the latter's own ground. Nevertheless there is a fair sprinkling in the list of exhibitors of names which are "household words" in the British building industry and whose activities extend over the whole of Great Britain. One of the outstanding points about the Glasgow Centre is that it will crystallise the North British building materials industry, showing the Scottish architect both the whole range of local materials and products as well as those of English manufacture obtainable in Scotland. Research is also represented, as in London, by displays arranged by the Building Research Station and the Forest Products Research Laboratory. Close to the administrative and technical offices there is a reading room where the technical journals may be consulted. It appears as though the success of the Scottish Building Centre is well assured.

**External Rendered Finishes.* By F. L. Brady, M.Sc., A.I.C., and L. F. Denaro, Dipl.Eng. (Zurich). Building Research Bulletin, No. 16. H.M. Stationery Office. Price 1s.

A PHILOSOPHY OF PLANNING

LEWIS MUMFORD'S "CULTURE OF CITIES"

Though architects may deny it, there is a third ingredient essential to the training of planners, beside the technical on the one hand and the sociological on the other; and that is the philosophical. Patrick Geddes once wrote that "the problems of bettering life and its environment are not separate ones, as political and other mechanically educated minds constantly think, and as religious ones have also too much come to believe. . . . It is not a matter of area and wealth. It is at bottom an experimental problem, that of starting a re-adaptation." And now a disciple of Geddes has endeavoured to state the philosophy behind that coming effort at re-adaptation in an enormous volume packed with social commentary and illustrated by over 150 picked photographs.

Not long ago Lewis Mumford published a work entitled *Technics and Civilisation*, which was frowned on by scientists but which proved extremely stimulating to artists. His new book, *The Culture of Cities*,* which is something of a sequel to it, is a more direct and satisfying expression of the author's creative mind and encyclopædic intelligence. In this book the method of exposition is finely suited to its purpose. Mumford deals in large social ideas; but it is his unerring instinct for seizing on the significant details to illustrate them that makes the book not only readable but memorable. Even so there will be many architects and planners in this country who will read it with difficulty. The use of an exact but difficult terminology in æsthetics, psychology and technics will be dubbed a jargon†; the way in which many general statements are made without being supported by formal ocular evidence in the shape of plans and schedules will be a cause of irritation among the profession itself; and the political significance of the author's beliefs—in spite of their obvious relevance—will be distasteful to others.

Taking the Geddesian trinity of Place, Work and Folk as a text, one can cite Patrick Abercrombie as a notable teacher in the art of planning with the emphasis on the first of these three conditions: Sir Gwilym Gibbon in his recent book had a distinct bias towards the second (as Abercrombie himself noted in a review in these columns). Mumford's emphasis is on the third. His main interest is the social basis of the new urban order, the changeover from a money economy to a life economy, and the establishment of a regional framework for civilisation. In his view the *civic* education of the individual is of prime importance, in that it alone can raise the collective energy and the collective wisdom of a community to the point where it can adapt its environment to its needs, instead of *vice versa*. For him the difference between what he calls "a power State" and "a service State" must be something like the difference between the Old and New Testament: the first is a jealous god, the second increases its power only to render a greater service. With such a philosophy, it is hardly to be wondered at that Mumford finds in the totalitarian States a negation of life and a poor source of hope for the future; no matter to how fine a point their purely technical weapons may be sharpened. "They profess," he says, "to regard the liberal politics of the nineteenth century with scorn; but in fact they carry on the same traditions in an even more costly way, with the further disadvantage that their political mind must be kept at high pressure in order to divert attention from the human sterility of the power State's achievements. They go through the forms of voting without the privilege of casting even a negative vote; they go through the forms of sounding public opinion without daring to hear more than one side: even more than the most imperialist States of the nineteenth century they endeavour to wipe out local differences, local preferences, local pressures."

Now the most important chapter in Mumford's book is precisely the one in which he points to regionalism as the only alternative to a decaying metropolitan culture. He sees the region as potentially the unit that the metropolis was under the past economic regime, and argues that its re-animation and rebuilding as a deliberate work of collective art is the grand task of politics for the opening generation.

This is, I think, a high point of interest in this remarkable book. Mumford's ideas embrace the garden city ideal, but go considerably further. To begin with he re-states Ebenezer Howard's original concept, which to-day, in the face of innumerable municipal housing estates and open developments in suburbs, has become a little obscured. He introduces the subject (somewhat maliciously) by saying, "at this point a benign Englishman, unfettered by those forms of specialised competence that paralyse creative thought, published a book called *To-morrow*," and then proceeds to summarise its essentials. The first point to be noted is that the land in the garden city is not parcelled out into individual ownership: it must be held by the common authority under which it is developed. The second is the characteristic of controlled growth and limited

**The Culture of Cities.* By Lewis Mumford. 8vo. xii+596 pp. London: Martin Secker & Warburg. 1938. £1 1s.

† Even the followers of Geddes and his palæotechnic and neotechnic orders will have to extend their vocabulary to cover Mumford's biotechnic terminology with its use of such words as mononucleated, contrapuntal and mechanocentric. There are compensations, however, in occasional American colloquialisms, in the use of "names of assembly" such as Coketown, and in the appearance of some new words such as "smog" (an aerial blanket composed of smoke and fog).

population. The third is the necessity for a green belt of open land, both for recreation and for the production of food. The fourth essential attribute of the garden city is that of functional balance. "By providing in his scheme for a balanced environment, with a full equipment of social services, Howard offset the disadvantages of one-sided schemes of decentralisation . . . and avoided the weaknesses of the specialised dormitory suburb and the specialised company town."*

Mumford then points out that the main obstacle to decentralisation is the same to-day as it was during the last two centuries, namely, that without the middle-class and upper-income groups that usually exist in a big city, a community of workers is unable to support the necessary civic equipment of roads, sewers, fire department, police service and schools. The taxes derived from well-to-do districts are partly applied to improving the facilities and amenities of life in the working-class quarters. Satellite cities therefore—even garden satellite cities—are not the whole answer to the problem; since, as Mumford puts it, the very word indicates that one particular city is assumed to retain planetary proportions; whereas from the standpoint of social integration, each unit should have equal "valence" in the regional scheme. "Before the metropolis can achieve a healthy orderly life it must boldly rebuild its own internal structure, as well as its outlying areas, on similar lines."

Here are the two sides to the problem, so often regarded in this country by advocates of garden cities and their opponents as being only one-sided: the breaking down and redevelopment of the central areas, and the creation of new, fully serviced, balanced communities. And Mumford does not evade the fundamental issue. He shows quite clearly that this progress is impossible without public ownership of the land.

There is in fact a good deal to be learnt from experiments in the U.S.A. on the subject of regional and national planning. This book refers frequently to the Tennessee Valley experiment, to Radburn, New Jersey, to Henry Wright's Report on Regional Planning for New York State (which is compared favourably with Thomas Adams' Report on the Metropolitan District), to the Green Belt towns, to Frank Lloyd Wright's *Broadacre City*, and to post-deflation developments in Manhattan, Cleveland and Chicago.

It would be impossible in a short review to give an adequate idea of the contents of this book. Briefly, it may be said to be half historical and half prophetic. There are seven chapters, of which the first three deal with the past, the fourth with the present, the last three with the immediate and more distant future. The opening chapter plunges straight *in medias res*, that is to say, into an appraisement of the real worth of mediæval culture as expressed in its towns. Oddly enough, the author does not go any further back into history either for theory or example; and when discussing protection and the mediæval town, he does not refer to the open development of certain towns under the *pax Romana*, where the first line of defence was not the city wall but the frontier.

If the mediæval town receives the higher valuation which it deserves in the first chapter, the Renaissance town is stripped of all its pretensions in the second. Mumford will only allow the Baroque city two saving virtues: a sense of space and a deliberate effort to bring the country back into the town, for the benefit of the landed aristocracy at least. Something less than justice is done to the eighteenth-century landowners, particularly in England, and to the urbane manner of living, the high level of standardisation in furniture and housing, the improvements in agriculture, and the fashioning of the countryside into an environment which has maximum recreational value for us to-day. But the full blast of invective, and the most biting satire, is reserved for Chapter Three, which deals with "the insensate industrial towns". The most effective condemnation is that quoted from the works of writers of the period; and to it is added a penetrating analysis of the disorders of the non-city, including the factory and the slum, utilitarianism, agglomeration, and the impoverishment of city life in all its aspects, from super-slum to tenement.

The fourth chapter traces the rise and fall of the giant metropolitan cities as the typical products of imperialism, the machine age and capitalist economics. Mumford modifies Geddes' cycle of growth and decay, and calls his six stages *Eopolis*, or the rise of the collective village community; *Polis*, the city proper; *Metropolis*, the capital or mother city; *Megalopolis*, or the overgrown city, beginning of the decline; *Tyrannopolis*, seat of State Cæsarism and municipal bankruptcy; and *Nekropolis*, or the ruined city of the dead.

From this point onwards the book is mainly concerned with the possibilities of renewal as an alternative to the morbid process just described. All of us have felt, at one time or another, the same despair of civic life and the civic environment, whose symptoms Mumford traces in this book. We all realise, when we think of it, that the existing pattern of economic life cannot remain stable. We are all wary of change, the more so since recent crises have shown us a glimpse of frightful dangers which before we hardly thought existed. A study which traces so carefully and so imaginatively the way we have come and the way we are going is therefore an important and a significant work; and *The Culture of Cities* may well prove to be one of the enduring books of the day. Lewis Mumford may be compendious and exacting; but he has the true synoptic vision.

WILLIAM HOLFORD [*A.*]

* In another paragraph he observes: "we must provide an environment broad enough and rich enough never to degenerate into a 'model community'."

Book Reviews

THE ART OF ARCHITECTURE*

Behind whatever objective purpose an historian may propose to himself there is generally a prophet's indignation with the state of his own times. Few historians describe the past in order simply to recount the facts, most want to convert someone to their view of history, to establish a hundred and one "true principles" (according to Serlio, Vignola, Palladio, Guadet, Viollet le Duc, Pugin, Fergusson, and all the rest). Some evangelising spirit is perhaps inevitable and indeed desirable. Histories that are merely lists of facts may be useful as essential backgrounds for others to form their opinions, but cannot, by their nature, be creative elements in the development of thought or practice.

For reasons which cannot be discussed here there has developed in England in recent years a self-conscious feeling among some parts of the profession that they are supporting not merely their particular view of history but the very structure of historical study itself. This comes from a belief, which is quite unjustified, that historical studies are now despised, that contemporary opinion is that old buildings don't count, that, as Henry Ford said, history is all bunk. Though the present-day historian of this kind, no less than his predecessor who wrote in the comfortable days when History was History, retains the assurance of prophetic utterance, he has unfortunately acquired some of that Elijah feeling that the whole obligation to maintain righteousness is on him. He, like Elijah, is unaware that there are prophets hid by fifty not merely in the well-known caves of antiquity, where he might expect to find them, but in the iconoclasts' own dens of iniquity, the pernicious schools and marsy offices.

The main thesis of *The Art of Architecture* is perhaps a challenge to look back on the past, not for fun, not for the delights of Culture, but because conscious alliance with the past is the only way of assuring a good future, because through the whole achievement of architecture everywhere in the world and in all periods there runs a thread of continuity which, inverting the description of the giraffe, must be believed first and seen or felt after.

Thus in the blurb on the dust cover, for which the authors may not, certainly, be responsible, it is stated that this "comprehensive treatise" shows "the continuity of basic principles in the art of building." But in the argument as given in the book it never appears evident what exactly these *principles* are, and it can be doubted whether it could be shown. In fact there are statements constantly made with reference to various aspects of the work that deny the thesis. If we look for any definition of the basic principles the nearest we can get is a statement that "the five principles are disposition of masses, structural sympathy, sequence of contrasts or harmony, axial formation and dramatised characterisation." But those are not "principles" in the philosophic sense. They are not ideals or even constantly maintained objectives. Elsewhere on this matter of principles it is said: "there should be no issue between principles of buildings constructed of steel or reinforced concrete and those formed of such materials as brick, stone or massed concrete, but only the need to consider each type for definite and specific circumstances. Once the principle of type of building and type of construction is grasped the vexing question of a formula for all building will be settled for good"; and this is followed by a cryptic statement that "industrial architecture should confine its expressions to relevant forms without invading the sphere of other legitimate expressions in architecture."

What can be made of this? What indeed are the differences between the universal principles of the first sentence and the special principles of type of building or construction of the second sentence? How can history substantiate the demand that industrial architecture must mind its own stylistic business apart from the universality of form and expression that will be evident in architecture of any time and style? What indeed is industrial architecture?

In the chapter on planning, to give another instance, we are told that the principles which govern the art of planning are the same to-day as those which were followed in the past, but in the introduction we are told that Rome "brought about a *new conception* of planning." "The past" during which the principles of to-day applied is never defined. Was it pre-Roman, and, if so, what exactly is the significance of "new conception" and what is the difference between a new conception and a new principle? Are the principles of planning of Frank Lloyd Wright, John Belcher and a mediæval town planner the same or are the differences, which would seem fundamental, merely "new conceptions" planted on a structure of basic principles? The reader presented with questions like this, as he is in every part almost of the argument, can only with difficulty get any answer and mostly gets none. Inexact terminology may seem a very minor point, and those points we have noted are only one or two out of a text three hundred pages long, but the same lack of definition persists throughout, so that although one cannot help but be fascinated by the

**The Art of Architecture.* By Professor A. E. Richardson and Professor H. O. Corfiato. 8vo. xxiv+662 pp., inc. approx. 300 pp. photographs. London: United Universities Press, 1938. £2 2s.

erudition shown and the enthusiasm that pervades the study it is best to allow oneself to be carried along by the enthusiasm and not to stay at any point to think.

The greater part of the book is a perfectly straightforward history of styles, broad in its reference and at the same time terse. This is history in the normal form excellently done. The concern is less with ideas and influences than with what was done: building at this or that time used this or that element of expression, columns, arches, horizontality, verticality, and so on. The sequence of form is well described and continuity is shown in all the formal and material developments of Western architecture: a factual rather than an emotional or ideological continuity. The student who reads this straight history part will get a generous view of architectural achievement and will receive indirectly some part of Professor Richardson's sympathetic understanding. Wherever in this part "principles" are referred to, it is generally in the narrow meaning of the choice of forms or, if choice implies too great an element of volition, the meaning of the underlying elements of plan form and façade design which are, as we are led to understand elsewhere, "predetermined" by circumstance.

The three chapters following the introduction survey the whole of European and Egyptian architecture from ancient days to the close of the Renaissance. Then a chapter of ten pages deals with Scandinavian and Russian architecture. Later chapters in the first part deal with American, non-European and "picturesque architecture," a description used for non-academic styles and the imitative "rustic" buildings of the nineteenth century. A capricious separation for authors who are concerned to represent the universality and permanence of principles. "The dictates of the climate, particularly snow and heavy rainfall, have determined the features that give the picturesque quality" and "the picturesque in architecture may be defined as the unsophisticated assembly of local materials in forms to harmonise with the landscape."

In the contemporary survey of architecture a number of types of buildings are considered with a strange and not very useful admixture of technical fact and theory. For instance, Sabine's and other acoustic formulæ are given, and oddments of planning data, such as; in churches, "a consideration of vital importance is the position of the choir and the organ," and so on, and curious banal statements such as "the planning and design of public and private swimming baths . . . are within the scope of modern architectural practice"; and "industrial buildings . . . many of these buildings belong to that division of architecture calling for the collaboration of the structural engineer"! These are lecture notes detached from their context.

Part 2 deals with decoration objectively and rather fatalistically, since we are told that "looking at this special branch of art [decoration] merely from the standpoint of history, it is to be doubted if any better results could have occurred except from totally different causes."

The book ends with a magnificent architectural panorama of photographs which shows—as indeed is shown throughout the work—the comprehensive and original scope of the authors' studies. They are never content to illustrate merely the best known, but always from their point of view the most significant buildings, and bring into the scope of academic study numberless buildings that have been neglected hitherto. It is disappointing that the captions are not used to enlighten or emphasise the argument. It is little use being told only what can be seen by a casual glance at the photographs: "example of Distyle in antis with End Walls of the Cella produced to form Antæ," or of the Erectheion, "a Tribune Design with Supports in the form of Human Figures," or of a Lloyd Wright house, "Effective contrast of light and shade." A big opportunity has been lost here.

The text is illustrated by innumerable and unnumbered line drawings beautifully drawn by Mr. Block, Mr. Hottinger and Mr. Stammers.

LITTLE AND GOOD

A Miniature History of the English House. *By J. M. Richards. 8vo. 72 pp. London: Architectural Press, 1938. 3s. 6d.*

It is a curious fact that until this book was published there was no small reliable history of the English house carrying the story through the "historical styles" up to date. Mr. Gotch's invaluable books, Addy's *Evolution of the English House*, and the large history by Nathaniel Lloyd all are still obtainable, but what Mr. Richards has given us now is something different. The Miniature History is frankly a pictorial synopsis derived from Nathaniel Lloyd and enlightened by an admirably clear text. Its most important use will probably be as a class book—and it is cheap enough for that—for general secondary school use, though no doubt there are more architects than one would care to estimate who will welcome the book as a pleasant informative reminder of what they know or think they know already. There are also many architects who take adult classes for laymen who will be glad to have a miniature history with plenty of good photographs and enough plans to demonstrate development which they can recommend their classes to read.

In his introduction Mr. Richards refers to the more modern section of his book by saying:—

"The parent work (Nathaniel Lloyd's history) finished with the end of the Regency period, except for a few Early Victorian examples, which were included to indicate the trend of the nineteenth century. The author was quite right not to go further, for a definitive history cannot be written until sufficient time has elapsed to allow the subject to fall into proper perspective. In the case of a simple handbook, however, that is concerned as much with the facts of history as with their causes and significance, to link the past with the present day by emphasising that which is still within the period of our own memories is one way of making the distant past more real."

In a later note the author adds: "In the notes . . . a definite attempt has been made, while still giving the essential information about . . . details . . . to explain the evolution of the English house not as a series of unaccountable changes in design, but as a series of effects traceable to comprehensible human causes," and in so far as that can be done in a series of notes, Mr. Richards has succeeded completely. Though inevitably a few half-truths are given by brevity the apparent validity of facts, in general Mr. Richards has with rare success overcome the difficulties of combining brevity, readableness and accuracy. Only one slip has been noticed, where it is stated of a 1790 house that "it is late enough in date for a simple coping to have replaced cornice and parapet." A fact that is a very uncertain guide to "lateness," as is shown by the good picture of a 1705 house in the street where the Architectural Press has its office. But that is by the way. The book is good and useful and to be recommended.

DESTRUCTION OF PESTS

DOMESTIC PESTS. WHAT THEY ARE: HOW TO REMOVE THEM. *By L. Hunter. 8vo. xii+236 pp. London: Bale. 1936. 7s. 6d.*

Mrs. L. Hunter has provided a most interesting and informative volume on pests of almost every conceivable type from bed bugs to fleas, lice, flies (house fly, blow fly and lesser house fly), cockroaches, crickets, bristle tails and spring tails, book lice, beetles, moths, earwigs, wasps and ants, mites, spiders, rats and mice. In the matter of plant pests Mrs. Hunter has written a most appropriate chapter on spores and fungus in their relationship to dry rot.

In her treatment of the varied forms of domestic pests, excellent service is rendered by the care with which the author has collated information on appearance, mode of progression, production, food eaten and habitat of the pests.

She sets off to answer in detail many questions like the following :—

Why have I got dry rot in my floors ?

Why does my bread and jam go mouldy ?

Why are my walls discoloured and have patches of " salt " on them ?

Why are my clothes moth-eaten after being packed away, although there are no moths in my cupboards ?

How can I prevent rats and mice invading my larder and spoiling food ?

Why do flies swarm over the food and wander over crockery and window-panes in warm weather ?

Why does some of my furniture become " worm-eaten " and riddled with little holes ?

Why do cockroaches swarm over my kitchen floor at night ?

Why do some children have lice and fleas living on them, and pass them on to my clean children ?

Are those little silver fish-like animals which run about so quickly in my kitchen cupboard doing any harm ? Why are they there, and how can I get rid of them ?

Probably the most interesting of the chapters is Chapter VIII dealing with the bed bug ; most interesting because it is the pest on which possibly as much public expenditure of money is made as on any domestic pest at the present time.

" The bed bug," says Mrs. Hunter, " is a common and troublesome pest and is one of the most objectionable pests which infest the house. It spends the whole of its time in the home, either sucking blood from members of the household, or breeding in some crevice of furniture or wall. It lives and breeds wherever strict attention to cleanliness is not maintained, so that if a single female bug is brought into a house, probably in some furniture or trunk, it is possible for a home quickly to become infested . . . a bug from a dirty house may travel into a clean house and attack members of the household. After a meal of human blood, it will return to the dirty house, where it can live and breed unmolested.

" The demolition and reconstruction of old insanitary houses . . . in recent years . . . has revealed not only the great number of houses which are bug-infested but how easily a new house can become infested.

" Bugs are a menace to national health.

Mrs. Hunter's book is of great importance to all engaged in housing and her treatment of the many problems created by domestic pests should have the most careful consideration of housing authorities, members of housing committees and officials of housing departments.

The book is well illustrated, and of interest even to a reader who is mainly seeking information on an engrossing though unpleasant subject. R. A. H. L.

FRANCISCAN ART IN ENGLAND

FRANCISCAN HISTORY AND LEGEND IN ENGLISH MEDIÆVAL ART. *British Society of Franciscan Studies vol. xix. Edited by A. G. Little. 8vo. 119 pp.+56 plates. Manchester University Press. 1937. 21s.*

This book is the last that the British Society of Franciscan Studies will publish, as it has been decided to dissolve the Society now that funds and the material still remaining to be worked on are small. St. Francis has always enjoyed a degree of popularity not accorded to other saints, but the recent interest in him has lasted since 1880 or so, and research has continued ever since, prompted partly by Sabatier's *Vie de Saint Francois d'Assise*, published in 1894. The Society's penultimate production was A. R. Martin's *Franciscan Architecture in England* (reviewed in the JOURNAL for 8 November 1937). The present volume deals with the scant but interesting remains in wall paintings, screen paintings, glass, illuminated manuscripts, seals and sculpture. Franciscan churches are naturally the principal storehouses of this art, which a relaxing of the original austerity of the order after 1230 allowed to flourish. But wall paintings and screen paintings in English Franciscan churches have all perished, so that the book illustrates the traces of Franciscan influence in parish churches. These traces are found in a large number of places, some of them most unexpected.

The book is well produced and the plates are exceptionally clear. The Society is to be congratulated on a swan song which shows such devotion to its patron.

ANTIQUARIES

PROCEEDINGS OF THE SOCIETY OF ANTIQUARIES OF SCOTLAND. *Session 1936-37. Vol. lxxi (6th series, Vol. xi). 4to. xlvi+446 pp. +7 plates.*

In the latest volume of the Proceedings of the Society of Antiquaries of Scotland Sir George Macdonald, President, contributes a note on the Roman Fort at Croy Hill. The outline of the fort was ascertained in 1913 ; the recent excavations opened up the *Principia*, which is described in detail with a clear plan. This was a four-square building about 67×62 ft. Among the most interesting details discovered were the sleeper-trenches under the *sacellum*, which, except for an analogy from the wooden bridge at Jagsthausen, appear to be unique. The report also describes the Military Way and the Granary.

Another report of architectural interest is on Rait Castle and Barevan Church, Nairnshire, by Dr. W. Douglas Simpson.

SIR FLINDERS PETRIE'S LATEST EXCAVATION

ANTHEDON, SINAI. Report of the 42 years work of the British School of Archæology in Egypt. *By Sir Flinders Petrie with chapters by J. C. Ellis. 4to. viii+16 pp.+51 plates. London University College and Quaritch. 1937.*

This report of the forty-second year of the British School of Archæology in Egypt describes the excavation of Anthedon, near Sinai, by Sir Flinders Petrie, with Mr. J. C. Ellis as his chief assistant, and Mr. C. Pape [*A.*], in 1936. The site was discovered almost by chance during a journey across the desert south-west from Gaza. Excavations revealed a series of fortress towns built presumably to guard the Egypt-Palestine frontier, the latest being from about the Christian era to about 64 B.C., the earliest from about 1275-1212 B.C. The excavation was rich in finds of archæological interest. The publication is notable as the one hundredth work by Sir Flinders Petrie.

INDIA

THE SPIRIT OF INDIA. *By W. J. Grant. La. 8vo. viii+120 pp.+142 photos. London: Batsford. 1938. 10s. 6d.*

This is another of Batsford's magnificently illustrated books on countries and places, and for an architectural journal that must be interested in good pictures of buildings, a book like this has value. The text, however, in so far as it is descriptive of places is just good unarchitectural " travelogue." A large part is concerned with India's life, and, as the title says, her spirit, which the author succeeds in interpreting sympathetically, if a bit pompously.

Review of Periodicals

Attempt is made in this review to refer to the more important articles in all the journals received by the Library. None of the journals mentioned are in the Loan Library, but the Librarian will be pleased to give information about price and where each journal can be obtained. Members can have photostat copies of particular articles made at their own cost on application to the Librarian.

Normally the journals referred to in this review, all of which are in the R.I.B.A. reference library, cannot be borrowed. Members are, however, asked to encourage their local public libraries and their local society's library to take as many journals as they can afford; and they are asked, for the convenience of local members, to notify the R.I.B.A. of what journals are known to exist in public or private hands in their own neighbourhood.

SCHOOLS

ARCHITECT AND BUILDING NEWS. *1938. 4 November. P. 132.*
King Edward VI School at Southampton, by E. Berry Webber [*A.*].

ARKKITEHTI (HELSINGFORS). *1938. No. 9. P. 139.*
Commercial school in Viipuri, Finland, by Ragnar Ypyä.

UNIVERSITIES

R.I.B.A. JOURNAL. *1938. 7 November. P. 27.*
School of Anatomy, Cambridge University, by Stanley Hall & Easton and Robertson [*FF.*].

REVISITA DE ARQUITECTURA (BUENOS AIRES). *1938. September.*
Number on university buildings. Photographs and plans of individual buildings at Oxford, Cambridge, London, Rome, Madrid, Oslo, Athens, Berne, Montreal, the Dessau Banhaus, the university city at Paris, and several in the U.S.A.

LA CONSTRUCTION MODERNE (PARIS). *1938. 6 and 13 November. P. 46.*
Institute of Medicine at Marseilles, by Senès, Lajarrige and Poutu, training doctors for colonial careers, and carrying out research work on tropical diseases, etc.

LABORATORIES

ARCHITECTS' JOURNAL. *1938. 3 November. P. 717.*
BUILDING. *1938. November. P. 443.*
Laboratories for the Metropolitan Water Board, by Stanley Hall & Easton and Robertson [*FF.*].

EXHIBITIONS

BYGGE KUNST (OSLO). *1938. No. 8. P. 157.*
Pavilion for the Oslo " Kommune " at the Vi Kan exhibition in Oslo, 1938.

BAUMEISTER (MUNICH). *1938. November. P. 360.*
The first " Dopolavoro " exhibition in Rome, 1938. Pleasant small exhibition layout, including swimming baths, open-air theatre, cinema, hostel, restaurant and dance hall.

CIVIC

ARCHITECTURAL REVIEW. *1938. November.*
Special issue on Norwich City Hall, by C. H. James and S. Rowland Pierce [*FF.*]. The issue deals with the development of the design and the functions of the plan, and illustrates the building in detail floor by floor. A summary of the general construction and provision of the various services is also given.

ARCHITECTS' JOURNAL. *1938. 10 November. P. 753.*
ARCHITECT AND BUILDING NEWS. *1938. 11 November. P. 151.*
Norwich City Hall, by C. H. James and S. Rowland Pierce [*FF.*].

ARCHITECTS' JOURNAL. *1938. 3 November. P. 731.*
Public baths and fire station at Northampton, by J. C. Prestwich & Sons.

THE BUILDER. *1938. 4 November. P. 879.*
The Hall of Nations, Cardiff, by Percy Thomas [*F.*].

NATIONAL BUILDER. *1938. 10 November. P. 126.*
Swinton Town Hall, by Percy Thomas and Ernest Prestwich [*FF.*].

HOTELS

MODERNE BAUFORMEN (STUTTGART). *1938. November. P. 613.*
Hotel on the Rhine by Ernst Huhn, and two alterations and redecorations to hotels by the same architect.

OFFICES

ARCHITECTS' JOURNAL. *1938. 10 November. P. 769.*
ARCHITECT AND BUILDINGS NEWS. *1938. 4 November. P. 118.*
THE BUILDER. *1938. 4 November. P. 870.*
The New " Adelphi "; offices by Collcutt and Hamp [*FF.*].

ARKKITEHTI (HELSINGFORS). *1938. No. 9. P. 134.*
Office building for a wholesale firm in Viipuri, Finland, by T. Paatela.

SHOPS

ARCHITECT AND BUILDING NEWS. *1938. 4 November. P. 128.*
Façade and external showcases for a shop in Bond Street, by S. Chermayeff.

ARKITEKTEN (COPENHAGEN). *1938. No. 9. PP. 125, 133.*
A good shop with offices over by A. Jacobsen, and a large drapery by B. Helweg-Moller.

INDUSTRIAL

BUILDING. *1938. November. P. 448.*
A large chemical factory near Prague, with a small block of workers' flats adjoining, by J. Fragner. A steam electric power station, and motor showrooms at Koln nad Laben, both by the same architect, are also illustrated.

MODERNE BAUFORMEN (STUTTGART). *1938. November. P. 585.*
Extensions to Borgward's works in Bremen, by Von Rudolf Lodders and Fr. Siinnemann, comprising a motor shed and a two-storey workshop building.

TRANSPORT

APXNTEKTYPA (MOSCOW). *1938. No. 8. P. 25.*
Moscow Metro. stations.

HOSPITALS, ETC.

R.I.B.A. JOURNAL. *1938. 7 November. P. 5.*
Part I of an article by W. H. Evans on Operating Theatres, dealing with the planning of the theatre, and its lighting, heating and ventilation.

R.I.B.A. JOURNAL. *1938. 7 November. P. 21.*
Schedule of requirements in the planning of hospitals, applicable to an acute general hospital of about 200 beds. The schedule is in a form that can be filled in by any hospital authority, and was prepared by the Hospitals Committee of the Building Centre.

APXNTEKTYPA (MOSCOW). *1938. No. 8. P. 50.*
Projects for sanatoria at Scotchi and Kazan.

SPORTS BUILDINGS

ARCHITECT AND BUILDING NEWS. *1938. 4 November. P. 124.*
Cricket pavilion at Reigate, incorporating two cottages, by Sir Edwin Lutyens.

THE BUILDER. *1938. 4 November. P. 868.*
The Sports Pavilion ; part IX of The Approach to Planning Series, by F. Bennett [*A.*].

LA CONSTRUCTION MODERNE (PARIS). *1938. 6 and 13 November. P. 57.*
Municipal indoor swimming bath at Pantin by J. Molinié and C. Auray.

THEATRES—CINEMAS

L'ARCHITECTURE D'AUJOURD'HUI (PARIS). *1938. September.*
Excellent number on " Le Spectacle," dealing with theatres, cinemas, decorations for public celebrations, etc. Auguste Perret contributes an interesting article on the historical development of the theatre, with good comparative plans, and a series of diagrams of the stages of different European theatres ; Jacques Rouché writes on the opera and architecture, and Jean Boski on the evolution of lighting in the theatre. The theatre of the Chaillot Palace in the new Trocadero, Paris, is illustrated, and there is a section dealing with its air-conditioning installation. Other theatres are the remodelled Théatre Français, theatres at Sidi-bel-Abbes, Carcassonne, the experimental theatre at the 1937 Paris exhibition, the People's theatre, Oslo, projects for a theatre at Arnheim, an interesting flexible theatre for 4,000 spectators, and a steel and canvas itinerant theatre. Pierre Sonrel writes on the construction of experimental theatres, and there is a short section on open-air theatres.

Several good cinemas are illustrated, the most notable being at Utrecht, Marseilles, Bucharest and Copenhagen.

Jacques Vienot writes on the growing tendency for large public celebrations, and there are well-selected photographs of Paris, Nuremberg, etc., and a good article by Jacques Tournant on the elements and decorations of fêtes, and by Gaston Bardet on the crowd as actor and spectator. Finally there is a liberally illustrated article by André Boll on the evolution of stage settings.

RELIGIOUS

ARCHITECT AND BUILDING NEWS. *1938. 11 November. P. 147.*
The Church of the Holy Spirit, at Ewloe, North Wales, by H. S. Goodhart-Rendel [*F.*].

BAUKUNST (BERLIN). *1938. November. P. 353.*
Chapels, churches and village halls, by Winfried Wendland.

HOUSES

BAUKUNST (BERLIN). *1938. November. P. 361.*
Timber house in Tokio, by T. Yoshida.

FLATS

BOUWKUNDIG WEEKBLAD ARCHITECTURA (AMSTERDAM). *1938. No. 45. P. 373.*
Large blocks of working-class flats in Amsterdam, by P. Vorkink.

DOMUS (MILAN). *1938. October. P. 4.*
Apartment house at Genoa, by L. C. Daneri.

MATERIALS

THE BUILDER. *1938. 4 November. P. 887.*
The growth of welding ; part II of a series by P. C. G. Hausser on the structural engineer's part in modern building practice.

ARKKITEHTI (HELSINGFORS). *1938. No. 9. P. 129.*
Lecture by Alvar Aalto on the effect of materials on the art of building. Mention is made of standardisation, and the necessity for great flexibility in the combination of standard parts.

EQUIPMENT—HEATING—SANITATION

JOURNAL OF THE ROYAL SANITARY INSTITUTE. *1938. November. P. 420.*
The drainage and plumbing of the Earls Court Exhibition, an article by W. C. Easdale.

JOURNAL OF THE INSTITUTION OF HEATING AND VENTILATING ENGINEERS. *1938. October. P. 373.*
A companion of costs of heat supply by electrode boiler or by coke boiler to the same group of buildings, by S. Livingston Smith.

GENERAL

SHELTER (NEW YORK). *1938. October.*
Shelter has now become " a correlating medium for housing progress," after a short period of rebirth as a general progressive architectural paper. The October number has some bitter articles on the great dispossessed farming populations of Arkansas and California, and also articles on recent F.S.A. housing work. " Architecture and Life," an article by Albert Mayer, is a good statement of the aims of the periodical.

BYGGE KUNST (OSLO). *1938. No. 7.*
Issue devoted to a well-documented article by G. O. Jörgen on " Better and cheaper dwellings."

MODERNE BAUFORMEN (STUTTGART). *1938. November. P. 569.*
List of the more important buildings in Hamburg, with photographs, compiled for the information of visitors.

Accessions to the Library

1938-1939—II

Lists of all books, pamphlets, drawings and photographs presented to or purchased by the Library are published periodically. It is suggested that members who wish to be in close touch with the development of the Library should make a point of retaining these lists of reference.

Any notes which appear in the lists are published without prejudice to a further and more detailed criticism.

Books presented by publishers for review marked R.
Books purchased marked P.
* *Books of which there is at least one copy in the Loan Library*

ARCHITECTURE

Year book :—
BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

EDUCATION

BOSANQUET (R. C.) 72 (07) (495) : 82-6
Robert Carr B—. Letters and light verse. Ellen S. Bosanquet, ed. [With chaps. on British School at Athens.]
8½″. (iv) + 270 pp. + (iv) pls. priv.prin. 1938.
Presented by Miss Jane Lidderdale.

THEORY

HAUTECŒUR (LOUIS) 72.01
De l'architecture.
9¼″. "234" [232] pp. Paris : Morancé. [1938.] R.

PRESERVATION

72.025 (42.74) (06) : 72.034.8
GEORGIAN SOCIETY FOR EAST YORKSHIRE
Publications. Vol. I, pt. 1. 1937-38. Transactions, including articles [by various authors].
8½″. Hull. 1938. 3s. 6d. R.

HISTORY

KNOWLES (J. M.) 72.03 (42.74)
The Architecture of the West Yorkshire countryside. (Paper to Chartered Surveyors' Institution,)
pam. 8¾″. [Lond. 19—.]
Presented by the Author [*A.*].

SWEDEN YEAR-BOOK 72.03 (485) (06)
016 : 72.03 (485)
——, 1938. Edited . . . with the assistance of public authorities. [With chap. on Swedish architecture, and bibliog.]
7¼″. Stockholm : Almquist & Wiksells. 1938. R.

DANCE (GEORGE) *junior* Inf. file 72.034 (42).88 : 92D
Having received *&c.* [Letter with reference to his application for appointment as architect to the West India Dock Company. Signed G— W. D—.]
transcript, typescript. 1800 (1938).
Presented by the Librarian of the Guildhall, which possesses the original letter.

PROFESSIONAL PRACTICE

72.08 : 333.32
INTERNATIONAL HOUSING ASSOCIATION *and* INTERNATIONAL FEDERATION FOR HOUSING AND TOWN PLANNING
Miete für die minderbemittelten klassen.—Rents for the working classes.—Loyers *&c.*
11½″. (ii) + 288 pp. Frankfurt a.M. [1937.] R.

L.C.C.
Construction of buildings in London. [By-laws . . . in pursuance of 1935 Act, and various extracts.]
1938. 5s. P. (2) *for Loan Library.*

AMERICAN INSTITUTE OF ARCHITECTS 72.081.28
Architectural competitions. A circular of information. (Document, No. 213.)
Revised ed. pam. 11″. Washington. [1937.] R.

A Digest of the competition code. Supplementary to . . . Documents Nos. 213 and 238. (Document, No. 263.)
leaflet. 11″. Washington. [1937.] R.

The Duties of the professional adviser and of the jury. (Document, No. 238.)
Revised ed. pam. 11″. Washington. 1932 [1937]. R.

Standard form of competition program. (Document No. 219.)
pam. 11″. Washington. [1931.] R.
(*Bound together.*)

LANCHESTER (F. W.) 03 (083.53) : 518.2
L—'s "Potted logs" [logarithms]. A concise tabulation (slide rule auxiliary) for engineers.
pam. 7¼″. Lond. : Taylor & Francis. 1938. 1s.
Presented by the Author.

BUILDING TYPES
(CIVIL)

REEKIE (R. FRASER) × MS. 725.39 (73)
The Design and construction of civil airports in the United States of America. (Bossom Travelling Studentship, 1937, report submitted on completion of tour.)
typescript, *Repr. of D.*, & *Ph.* [1938.]
Presented by the Author [*A.*], DIP.ARCH.

ARCHITECTURE D'AUJOURD'HUI, *journal* 725.511
* [Special number :] Constructions hospitalières. (May.)
12½″. Boulogne. 1938. (Abt. 4s. 6d.) P. (2). *To Loan Library.*

MODERNE BAUFORMEN, *journal* 725.74
* [Special number : Swimming baths.] (Aug.)
11″. Stuttgart. 1938. (3s. 8d.) P. *To Loan Library.*

725.835
NATIONAL COUNCIL OF SOCIAL SERVICE : COMMUNITY CENTRES AND ASSOCIATIONS COMMITTEE (*formerly* NEW ESTATES COMMUNITY COMMITTEE)
New housing estates and their social problems.
4th ed. 9¾″. Lond. 1937. 1s. R.

(RELIGIOUS)

HARVEY (WILLIAM *and* J. H.) 726.821 : 726.5 (56.94J)
The Structural decay of the Church of the Holy Sepulchre. (*From* Palestine Exploration Fund Quarterly, July.)
pam. 10″. [Lond.] 1938.
Presented by the Authors [*F.*, —].

(EDUCATIONAL)

ARCHITECTURE D'AUJOURD'HUI, *journal* 727.61
* [Special number :] Muséographie. (June.)
12½″. Boulogne. 1938. (3s. 11d.) P. *To Loan Library*

(DOMESTIC)

LUCAS (EDGAR) 728
The Builder's book on the house. Planning, construction, fitting. 9¾″. vii + 168 pp. Lond. : Technical Press. 1938. 10s. 6d. R.

HAMLIN (TALBOT F.) MS. 016 : 728
House plan books prior to 1890 in the Avery Library. [Bibliography.] dupl. typescript. 11″. 1938.
Presented by the Author.

728.1 (485 S)
UNITED STATES : DEPARTMENT OF COMMERCE—BUREAU OF FOREIGN AND DOMESTIC COMMERCE
The Small-housing scheme of the City of Stockholm. By A. H. Oxholm.
pam. 9¼″. Washington : Govt. Printing Office. 1935. (c. 3d.) R.

STRAUS (M. W.) *and* WEGG (TALBOT) 728.1 (73)
Housing comes of age.
8½″. 259 pp. + pls. New York & Lond. : Oxford U.P. 1938. 10s. 6d. R.

MINISTRY OF HEALTH 728.1 : 333.32
Housing, England.—The Housing Acts (Equalisation Account) Regulations, 1938, *&c.* (Statutory Rules and Orders, 1938 No. 1231.)
leaflet. 9¾″. Lond. : H.M.S.O. 1938. 1d. R.

General housing memorandum No. 72.
leaflet, dupl. typescript. 9½″. [Lond.] 1938. R.

728.1 : 333.65] 352
CENTRAL HOUSING ADVISORY COMMITTEE—HOUSE MANAGEMENT AND HOUSING ASSOCIATIONS SUB-COMMITTEE
The Management of municipal housing estates. Report *etc.*
pam. 9½″. Lond. : H.M.S.O. 1938. 9d. R.

MINISTRY OF HEALTH 728.1 : 333.65] 352
[Management *etc.*] Report on the management of municipal housing estates. (Circular 1740.)
pam. 9¾″. Lond. : H.M.S.O. 1938. 2d. R.

CASABELLA, *journal* 728.5
* [Special number : Alberghi [hotels].] (May-June.)
12″. Milan. 1938. P. *To Loan Library.*

ALLIED ARTS

NATIONAL REGISTER OF INDUSTRIAL ART DESIGNERS
Annual report . . . for . . . 1937-38 *etc.*
1938. R.

BUILDING SCIENCE

69 : 5/6
DEPARTMENT OF SCIENTIFIC AND INDUSTRIAL RESEARCH : BUILDING RESEARCH
*Principles of modern building. By R. Fitzmaurice.
Vol. i. Walls, partitions and chimneys. 69.022 + 697.8
9¾″. Lond. : H.M.S.O. 1938.
10s. 6d. R. & P. 3

STRUCTURAL ELEMENTS

REDPATH, BROWN *and Co.* 69.023.941.5 (083)
Tables of working stresses for the design of steel columns *etc.*
7¼″. [Lond., &c.] 1938. R.

MATERIALS

RIVERS (R. R.)
How to buy timber (including plywood).
1936. 3s. 6d. R. *To Loan Library.*

CONSTRUCTION

CEMENT AND CONCRETE ASSOCIATION Inf. file 693.51 : 728
Cement house construction.
6 pams. 11″ in folder. [1938.] R.

REDPATH, BROWN *and Co.* 693.54 (083)
* Handbook of structural steelwork *etc.*
1938 ed. 7½″. [Edin., &c.] 1938. R. (2).

PROOFING

GLOVER (C. W.)
Civil defence . . . protection against aerial attack.
1938. 15s. P. *for Loan Library.*

GEOLOGY

SORSBIE (R. F.) 55
Geology for engineers.
8¾″. xxii + 348 pp. Lond. : G. Bell. 1938. 12s. 6d. R.

TOWN AND COUNTRY PLANNING, RURAL PRESERVATION

HOWKINS (F.) 711.1
Development of private building estates. An introduction *&c.* 2nd ed. of An Introduction to the development *&c.*
8¼″. xv+372 pp.+folding pl. Lond. : Estates Gazette. [1938.] 16s. 6d. R. & P.

WARREN (HERBERT) *and* DAVIDGE (W. R.), *editors* 711.13
* Decentralisation of population and industry. Papers contributed by several authors [Sir John Robertson and others].
7¼″. Lond. : P. S. King. 1930. 4s. P. *for Loan Library.*

DARBY (H. C.), *editor* 711.3—112 (42.57)
The Cambridge region. [By O. T. Jones and others.]
8½″. xiii+234 pp. Camb. : U.P. 1938. 6s. P.

GIRAUD (K. F.) × MS. 711.554 (43)
Industrial development in Germany with special reference to the Berlin and Rhine Valley zones. (Hunt Bursary, 1935, report.)
typescript. 14″. [1936.]
Presented by the Author [*A.*], A.M.T.P.I.

EASTON (KENNETH) × MS. 711.713 (4)
Continental motor roads. (Hunt Bursary, 1937, report.)
typescript, printed maps, *Ink D.*, & *Phots.* [1937.]
Presented by the Author, DIP.ARCH., DIP.T.P.

CAMBRIDGE PRESERVATION SOCIETY
Report & list of members. Year to 30 June 1938.
1938. R.

LIBRARY SCIENCE

026 : 3 (42.1) (058)
LONDON SCHOOL OF ECONOMICS AND POLITICAL SCIENCE : BRITISH LIBRARY OF POLITICAL AND ECONOMIC SCIENCE
Annual report. 1937-38.
8½″. Lond. 1938. R.

Correspondence

AIR-RAID SHELTERS

26 Old Burlington Street,
London, W.1
3.11.38

To the Editor, JOURNAL R.I.B.A.

SIR,—The suggestion by Mr. Austen Hall that subways under pavements might be adapted as air-raid shelters should receive support, especially if such subways can be made useful in peace time.

Under large open spaces air-raid shelters could be constructed and used as car parks under normal conditions. Such shelters should be accessible from several subways and ramps from the street. Any covered space used as an air-raid shelter should not contain or be close to large gas or water pipes which may be a source of danger in case of explosions and bombing.

The suggested subways could very well be adapted as entrances to shelters in basements of large buildings. The means of access and escape to the building in case of bombing and collapse must be provided. In particular where a large number of people are congregated in one shelter then several exits should be provided, preferably through subways to points in the street well clear of the building.

Yours faithfully,
S. BYLANDER

The letters from Mr. Austen Hall (in the last JOURNAL) and Mr. Bylander emphasise one important point among the many still requiring study in the new technique of Structural A.R.P. This is the question of the location of shelters in or in relation to typical city buildings. Only general recommendations have hitherto been propounded, though it has become abundantly clear that generalisations in Structural A.R.P. are very dangerous. As Mr. Hall suggests, what is wanted is a much closer study than has hitherto been made of a wide range of building types in order to discover the best locations. Pavement vaults, wholly or partially reconstructed, may well be one of these.

The underground garage-cum-shelter is quite a different matter. At first sight the idea is attractive, but I have yet to examine a detailed scheme (again there have been plenty of generalisations) which is not either an almost unworkable garage, or a death-trap for a thousand or more persons, or so fabulously expensive as to require a heavy State subsidy. There are also other objections to them, but these should suffice.

TECHNICAL EDITOR

MAILLART AND MOORE

The Studio,
Upton, Wirral
9.11.38

To the Editor, JOURNAL R.I.B.A.

SIR,—Art must find fresh forms of expression, not merely fresh media.

The influence within the artist is so strong that the struggle must inevitably end in victory for the artist, and so shapeless forms take on shape, not that they become shapely, but the poet turns them to shape, and I submit, with great respect to Mr. Cresswell, that Moore is a poet in the widest sense.

Cimabue and Van Gogh, opposite but true artists, are indifferent to the world's praise or blame.

Moore and the old Gothic carvers tore aside convention, because the thing they must say cannot be said by conventional means.

When we approach them with clean minds, we get the thrill which art can give and that spiritual appeal which may be sex but not sexual.

Your obedient Servant,
J. R. MEWTON [*L.*]

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4 Bond Street,
Hull
12.11.38

To the Editor, JOURNAL R.I.B.A.

DEAR SIR,—It is perhaps worth remembering that Whistler was accused of "flinging a pot of paint in the public's face."

Yours respectfully,
DUDLEY HARBRON [*F.*]

[*This correspondence is now closed.—Ed.*]

Notes

LECTURESHIP VACANT AT HULL COLLEGE OF ARTS AND CRAFTS

A full-time Lecturer in Architecture is wanted to give advanced instruction in the School of Architecture at Hull College of Arts and Crafts.

Salary Scale: £234 by annual increments of £15 to £480, the commencing salary to be according to qualifications and office and teaching experience.

Particulars and application forms (to be returned by 30 November) from the Director of Education, Guildhall, Hull, on receipt of a stamped foolscap envelope.

DESIGN FOR A ROSEWATER DISH FOR THE CITY OF LONDON

The Corporation of the City of London with the twelve chief Livery Companies are presenting a silver-gilt Rosewater Dish to the City of New York at the New York World's Fair in 1939. The Wardens' Silver Committee of the Worshipful Company of Goldsmiths is organising a competition for the selection of the design.

Particulars of the competition may be obtained from the Clerk of the Goldsmiths Company, Goldsmiths Hall, Foster Lane, London, E.C.2.

The last day for submitting designs is 10 December 1938.

SOCIAL COMMITTEE PARTY

The programme of the Social Committee Party on Monday, 12 December, which all members and students are invited to attend, is as follows:—

8.30 p.m.-1 a.m. Camera Club Exhibition. The subject will be "London."

At 9 p.m. and at 10 p.m.	The Dramatic Society will play "Still Life," by Noel Coward.
10 p.m.-1 a.m.	A Dance in the Henry Florence Hall arranged by the Dance Club. Billy Tait's Band will play.
9 p.m.-1 a.m.	Games Room.

Application for tickets at 3s. per head should be made to the Secretary R.I.B.A. Members are reminded that as accommodation is strictly limited only two tickets can be issued to each member or student and are allotted in order of application.

The poster and invitation card for the party were designed by two student members, the former by Mr. Goldhill and the latter by Mr. Delisle Burns.

MUSIC GROUP CONCERT

The concert organised by the Music Group for next Friday, 25 November, at 8.30 p.m., will consist of a programme of compositions by Victor Babin, to be performed by Laelia Finneberg, soprano; Vitya Vronsky, pianist; Lawrence Holmes, baritone; Max Rostal violinist; and the composer.

The programme, as at present arranged, is: Fantasia, aria and capriccio for paino solo; songs for baritone and songs for soprano, with piano accompaniment; six études for two pianos; Konzertstuck for violin and piano; and the Polovtsian Dances from Borodin's Prince Igor, arranged by Victor Babin.

No tickets are required, but programmes will be sold at 1s.

R.I.B.A. DANCE CLUB

The following are the dates of the remaining dances at the R.I.B.A. during the current session:—Friday, 9 December 1938; Friday, 3 February 1939; Friday, 21 April 1939.

The dances will start at 9 p.m. and finish at 1 a.m. The price of tickets is 6s. each. Not more than ten tickets will be issued to any one person.

Applications must be accompanied by a remittance for the appropriate amount, and applications cannot be made by telephone. Applications for tickets should be sent as soon as possible to Mr. R. W. H. Robertson, Clerk to the Dance Club, at the R.I.B.A. Cheques and postal orders to be made payable to the R.I.B.A. Dance Club.

APPLICATIONS FOR PASSPORTS

Readers of the JOURNAL may be interested to learn that the R.I.B.A. now appears in the list of professional associations attached to every passport application, whose members are authorised to countersign passport declarations.

FLORIDA ARCHITECTS' CONVENTION

The Florida Association of Architects will hold their State Convention in Jacksonville, Florida, on Friday and Saturday, 9 and 10 December 1938.

A cordial invitation is extended to all British architects.

NOTES FROM THE MINUTES OF THE COUNCIL

24 OCTOBER 1938

THE NATIONAL EMERGENCY

The action taken by the Executive Committee as a matter of urgency during the national emergency was reported to the Council and approved and confirmed.

BEQUEST OF DRAWINGS BY THE LATE MR. SYDNEY KITSON [*F.*]

The Secretary reported that the drawings by John Sell Cotman and others bequeathed to the Institute under the will of the late Mr. Sydney Kitson had now been received from his executor Mr. H. M. Hake.

The cordial thanks of the Council have been conveyed to Mr. Hake and to Miss Elisabeth and Miss Barbara Kitson.

THE LIBRARY TREASURES AND THE NATIONAL LIBRARY OF WALES

It was decided to send a special letter of thanks to Mr. W. Llewellyn Davies, Librarian of the National Library of Wales, for his generous and willing co-operation in giving a temporary home to the R.I.B.A. Library treasures during the recent crisis.

NATIONAL CONFERENCE OF THE C.P.R.E., 1938

The President reported that as a matter of urgency he had appointed Professor Patrick Abercrombie to represent the R.I.B.A. at the National Conference of the C.P.R.E., held at Chester from 13 to 16 October.

The President's action was approved and confirmed.

THE ELMES FUND

Mr. Duncan Campbell [*F.*] was reappointed to represent the R.I.B.A. on the Trustees of the Elmes Fund for a further period of three years.

THE R.I.B.A. ARCHITECTURE BRONZE MEDALS

THE BIRMINGHAM AND FIVE COUNTIES ARCHITECTURAL ASSOCIATION

The award of the jury in favour of Coroner's Court, Newton Street, Birmingham, designed by Messrs. Peacock & Bewlay [*F.*], was formally approved.

EXHIBITION OF WATER-COLOURS BY THE LATE SIR GUY DAWBER

The suggestion that an exhibition of the late Sir Guy Dawber's water-colours should be held in the Reception Room in June 1939 was cordially approved.

THE FELLOWSHIP

The Council, by a unanimous vote, elected the following architect to the Fellowship under the powers defined in the Supplemental Charter of 1925:—

Mr. Arthur James Marshall [*L.*] (Johannesburg).

MEMBERSHIP

The following members were elected:—

As Hon. Corresponding Members	2
As Fellows	7
As Associates	38
As Licentiates	8

ELECTION 5 DECEMBER 1938

Applications for membership were approved as follows:—

As Hon. Associate	1 application.
As Fellows	11 applications
As Associates	131 applications

ELECTION 6 FEBRUARY 1939

Applications for membership from overseas candidates were approved as follows:—

As Fellow	1 application
As Associates	13 applications

REINSTATEMENTS

The following ex-members were reinstated:—

As Fellows:	James Burford.
	Montagu Ashley Hall.
	Frank Reginald Gould Wills.
As Associates:	Albert Edward Bullock.
	Alexander George Morris.
	Thomas Ridge.
As Licentiates:	Stanley Bradley.
	Harold Burgess.
	Arthur Charles Duggan.
	Arthur Ernest Hughes.
	John Richard Mewton.
	Ernest Albert Newton.
	Blunden Shadbolt.
	Frederick Thomas Smith.

TRANSFER TO THE RETIRED MEMBERS' CLASS

The following members were transferred to the Retired Members' Class:—

As Retired Fellows:	William Henry Dashwood Caple.
	Alfred Henry Hart.
	Robert Robertson.
	Hugh Stammers Tiffin.
As Retired Associate:	Samuel Charles Brittingham.

RESIGNATIONS

The following resignations were accepted with regret:—

Harry Tom Boden Spencer [*A.*]

Walter Harry Woods [*Ret. L.*]

Obituaries

P. W. MEREDITH [*F.*]

Percy William Meredith [*F.*], F.S.I., was born in South London. Shortly after his birth his parents moved to Barnstaple where his father became a member of the well-known firm of Meredith Brothers, timber merchants, in that city. Their son received his early education there and afterwards was articled to a London architect, and in 1899 founded, with Mr. George E. Withers, the firm of Withers and Meredith, in Cannon Street, London, practising as architects and surveyors for nearly twenty years. In 1919 this connection came to an end, and Mr. Meredith removed to 34 Old Queen Street, Westminster, where he continued to carry on his profession until his death.

His first inclination was to quantity surveying, but early in his career his taste for design asserted itself, and he designed and carried out many important works. His activities covered a wide range and he has left many examples of his skill in London and the southern counties, assembly and concert halls, hotels, residential flats, business premises, cottage homes, town and country houses, the laying out and development of estates—especially in Surrey—being an essential part of his work; but the most notable are the many beautiful churches he built for the Congregational, Baptist, and other Free Church bodies. Outstanding examples are Christ Church, Leatherhead, Eltham Congregational Church, and the new Christian Science Church at Sutton, completed a few weeks ago.

He was elected a Fellow of the Royal Institute of British Architects in 1907 and of the Chartered Surveyors Institution in 1925.

Well known in Free Church circles he served the Streatham Congregational Church and more recently the Church at Leatherhead in several capacities, and was held in high esteem by his colleagues for his zeal and unfailing courtesy.

His sudden death in this sixty-fifth year on Thursday, 13 October, following an operation, came as a shock to his large circle of friends. A man of high character and integrity, he strove always to uphold the best interests of his profession.

WILLIAM EATON [*F.*]

The death of Mr. William Eaton, whose loss is much regretted, occurred in Manchester on 25 October. He was born in 1862, in Manchester, and served his articles in Oldham, besides attending the Liverpool School of Architecture for seven years.

He first worked in the Leicester Borough Surveyor's office, but in 1892 he went to Cardiff City Engineer's Department, under Mr. William Harpur, and worked on the Infectious Diseases Hospital and the Electricity Station. He also assisted Mr. Alfred Waterhouse in adjudicating the competition for the Cardiff City Hall and Law Courts. After seven years there, he became Borough Architect to the Battersea Borough Council, where he carried out housing schemes at a cost of £100,000 and their swimming baths at £50,000; the Mortuary and Coroner's Court, Disinfecting Station, Museum, Recreation Room, workshops, additions to the Library and extensive alterations and additions to the Town Hall and Municipal Buildings. Later, in 1906, he became managing assistant to Mr. W. Beddoe Rees, in Cardiff, under whom he helped to carry out a large number of housing schemes at Rhymney, Bedwellty and Gilfach Goch, being entirely responsible for the planning of schemes at Cwmcarn, Clydach, Llanelly and Pontymoyle.

For many years—prior to the establishment of the School of Architecture—he was lecturer at the Cardiff Technical College.

He had a very facile pen and pencil and his sketches frequently appeared in print. He was also successful in Welsh National Eistedfodd and other competitions.

A. DENNIS THACKER [*A.*]

We regret to record the death in Canada on 26 September of Mr. A. Dennis Thacker.

Mr. Thacker was born at Walsall and received his early training in Birmingham, and was employed in the office of Messrs. Bateman and Bateman of that city.

In 1904 he became secretary of the Birmingham and Five Counties A.A., where he was very popular, only resigning in 1908 when he went to Canada. He was for many years engaged in the office of Messrs. MacVicar and Heriot, Montreal. Later he practised under his own name and took a great interest in the welfare of the profession generally in Montreal, and was very popular among his fellow architects.

His principal works included the Christian Science Church, which he won in competition, and churches at Hampstead, Caughnawaga and Dundee for the United Church of Canada. One of the last things that Mr. Thacker designed were the new choir stalls and chancel furniture for All Saints Cathedral, Halifax. These were carried out by the Bromsgrove Guild of Canada and represent some of the finest carved modern Gothic work in the country. They received a special Honorary Mention award at the last R.A.I.C. Exhibition.

Mr. Thacker was buried at Chambly, Quebec, and is survived by his widow and three children.

GEORGE EDWARD POTTERTON [*A.*]

We regret to record the death on 5 September of Mr. George Edward Potterton. He was born in 1909, and received his training in the office of the late Mr. A. H. Ryan Tenison [*F.*] at 21 Great Peter Street, Westminster.

Mr. Potterton's work was chiefly of a domestic character, and he designed numerous houses, including one at Oxshott for P. F. N. Toulmin, Esq.; one at Folkestone for B. Kenyon, Esq.; and several in East Molesey and Esher. He was responsible for alterations to two houses at Potten Island for A. H. Philpot, Esq.; and new kitchens, etc., for the Mitre Hotel, Hampton Court. The Village Hall at Beckley, Sussex, was his last work, and this is being completed by Mr. G. Burrows Drury [*A.*].

ALLIED SOCIETIES

PRESIDENTIAL ADDRESSES

In contrast to the general round of Nature in which spring is the time of inauguration, budding and creation, bleak November is the germinating period for Lord Mayors, Parliaments and Presidents. Through all the length of Britain Presidents of Architectural Societies have been or are engaged in presenting themselves to their societies, adopting the sage disposition in review of past achievements and prophecy of future. It is impossible to do justice to the quantity and quality of all this speechmaking in the narrow corner of the JOURNAL available, which can provide only a record; for fuller reports the local papers of the places concerned must be consulted.

The Royal Incorporation of Architects in Scotland

The annual general meeting of the R.I.A.S., which had been postponed owing to the tragic death of the president-elect, Mr. Balfour Paul, was held in July, when Mr. T. F. Maclennan was elected president in succession to Mr. C. G. Soutar.

Sheffield, South Yorks and District Society

Mr. W. G. Davies [*F.*] in his presidential address at Sheffield on 20 October said that he was the first official-architect president for 12 years. He referred to the support the University gave to its architectural department and hoped that improved conditions would be provided when the University extensions are completed. In the body of his speech Mr. Davies talked about the contribution architects had to make to the welfare and efficiency of the community and the peculiar qualities of the architect that made it possible for them to serve the public as specialists. Critical references were made to the all-pervading influence of traffic and to the fact that we should not too readily assume that the work of all architects is above reproach—to get the full support of the public we had to see that it was.

Birmingham and Five Counties A.A.

At Birmingham on 7 October Mr. Cooke did not deliver a formal presidential address at the start of his second year in office, but he made some remarks recalling the principal events in the last session. He referred to the death of a number of the members who had died, including Mr. Bidlake and Mr. A. Dennis Thacker, who died in Canada. About 30 years ago Mr. Thacker was hon. secretary of the Association for four years. The Birmingham and Five Counties A.A. must, he said, be prepared to assist the general community in every possible way by offering advice on matters in which they could properly stand as experts. Service to the community should be put before service to the A.A.'s membership.

Among other matters he touched on Registration. Now we had to educate the public: more publicity should be given to bad schemes to improve or kill them before they were put in hand.

The Association's membership had increased and was one-third larger than two years ago. Although they had their own rooms and a full-time secretary, they were better off financially with a surplus of income over expenditure and an efficient organisation.

At a meeting on 21 October Mr. C. F. W. Dening lectured on "The Eighteenth-Century Architecture of Bristol."

Hants and Isle of Wight A.A.

Mr. A. L. Roberts gave his second presidential address at the Association's inaugural meeting on 22 October at Winchester. He talked about the Registration Act, which, he said, did no injustice to anyone, but gave a definite forward step to the whole profession. He wondered what steps could be taken to protect the profession against apparently legal dodging round the restriction on the use of the word "architect" and quoted an example of the description of a borough engineer as "designer" of a building. The matter needed investigation now so that when the Act came into force the attitude of the Registration Council would be known and clear. Mr. Roberts followed this reference to one kind of official architecture by discussing at some length the present status of the official architects in the R.I.B.A. and the work of the Official Architects' Committee. From official architects he turned to salaried architects and spoke harshly of the A.A.S.T.A.'s charter for assistants, which, he suggested, was bombastically written, one-sided and served no useful purpose, but on one point, the employment of architects as juniors to surveyors and engineers, he quoted the charter with approval.

The Association's new constitution had now been prepared and Mr. Roberts commended it to the meeting; arising from that he pleaded for a benefactor to endow the Association.

Finally, he recommended the members to start soon to look around for their next year's president, who would bear a great burden of responsibility, particularly in connection with A.R.P.

The address was followed by a good discussion, in which many members took part; A.R.P. was one of the chief matters raised.

The Bristol Society of Architects

The opening meeting of the 1938-39 session was held on 25 October, when over fifty members were present. In his inaugural address the president, Mr. J. Ralph Edwards [*F.*], gave a brief survey of the early history of the Society (which was established in 1850) and linked the aspirations of its founders with the responsibilities of present-day members. In the discussion which followed many constructive suggestions were made for developing the work of the Society—amongst which is the formation of a Monthly Luncheon Club for Junior Members.

OTHER ACTIVITIES

Besides presidential addresses, many societies have had papers read to them. The **Cardiff Branch** of the **South Wales Institute** has begun the new session with its usual vigour, under Mr. W. S. Purchon's active leadership. The Branch heard a lecture by Mr. R. A. H. Livett [*A.*], the Leeds Housing Director, on "Housing in an Industrial City" on 9 November.

Mr. Livett dealt with the problem of the slums, their clearance and the various methods of re-housing. He considered the precautions which it is possible to take in order to prevent the creation of new slums, such precautions including not only the provision of well-planned estates with well-designed buildings but also the inauguration of a sound system of house management.

Mr. Livett dealt with the problems of refuse disposal and of lifts in flats and he referred to the importance of planning on a large scale in cottage estates, with provision for adequate schools, churches, shopping and community centres, together with proper facilities for organised games.

The Cardiff Civic Society, of which Mr. Purchon is honorary secretary, held its annual general meeting on 28 October. Mr. S. C. Ramsay [*F.*] read a paper on "The City and Its Functions" and the annial report was presented. This showed an increase in membership and a record of important activities during the year, including the provision of play spaces for children in built-up areas, the suggested preparation of a comprehensive survey of open-air facilities for athletics, games, etc., and the possibility of the formation of a salt-water lake by weiring the Taff.

The **Sheffield, South Yorkshire and District Society** had a most instructive lecture on 10 November on "Planning Law and the Problem of Advertisements" by Mr. Desmond Heap, LL.M. Mr. Heap outlined the provisions for the control of advertisements

under the Advertisements Regulation Acts 1907 and 1925, which, in particularising the places and objects to be protected, limited its usefulness. Furthermore, the Act only provided for the imposition of a penalty not exceeding £5 and did not empower an authority to remove an offending advertisement; and it has since been held that the Act could not apply to blank walls of buildings used for advertising—a further curtailment of its scope.

Mr. Heap then considered the powers granted to local authorities under s. 53 and s. 47 of the Town and Country Planning Act 1932. Under s. 53 an interim development authority is able to secure *in advance* that any advertisement displayed will not "injure the amenities" of the district covered by a scheme, if "the developer" obtains consent from the authority for his scheme; but when a planning scheme comes into operation, and s. 47 of the Act operates, the authority is not in such a strong position. The powers conferred by the section, whatever may be their scope, will only be available to the responsible authority under a scheme to such an extent as may be provided for in the scheme itself, so that foresight is needed at the first stage in drawing up the clauses of the scheme. If, however, these powers have been adequately conferred, the responsible authority is able to require the removal of an offending hoarding—an advance on the Advertisements Regulation Acts. Appeal lies to a court of summary jurisdiction. The section also empowers an authority, if the scheme so provides, to control the manner and period of display of advertisements (subject to the exclusion of certain types of advertisement and to the fact that it does not apply to size or colour). The provisions of s. 47 are guardedly drawn and a compromise between the interests of the countryside and billposters. Its greatest defect is that nothing can be done until an offence has been perpetrated. Mr. Heap suggested that a system of licensing, which already applied to sky signs and in practice was employable by interim development authorities, should also apply to advertisements generally.

Membership Lists

ELECTION: 7 NOVEMBER 1938

In accordance with the terms of Byelaws 10 and 11, the following candidates for membership were elected at the Council Meeting held on Monday, 7 November 1938.

AS FELLOW (1)

REUBEN: SAMUEL SIMON [*A.* 1931], Bombay.

AS ASSOCIATES (2)

HOFMEYR: JAN HENDRIK CHARLES [Passed five years' course at the Liverpool School of Architecture, University of Liverpool. Exempted from Final Examination], Johannesburg.

KALLENBACH: CLIFFORD RAPHAEL [Passed a qualifying Examination approved by the Institute of South African Architects], Johannesburg.

R.I.B.A. PROBATIONERS

During the month of August 1938, the following Probationers were enrolled, in addition to those whose names appeared in the JOURNAL for 7 November:—

Needes, Percival James, *Barking*. Noble, Eric Robert, *Watford*. O'Brien, Harry Almgill, *Bradford*. Orbell, Wilfrid, *Worthing*. Orton, Richard Antony, *Harrow*. Peers, Leslie Francis, *London*. Pert, Keith Giscard, *Norwich*. Pitt, Roland Arthur, *Birmingham*. Pollard, Herbert Arnold, *Selby*. Power, Alan, *Hoddesden*. Price, Donald, *Wrexham*. Price, Thomas Gerald, *Brynmawr, Brecon*. Prowse, Eric John, *Exeter*. Pullar, Kenneth, *Methven, Perthshire*. Radford, Ann Maitland, *Potters Bar*. Rose, Lawrence Melville, *London*. Russell, Victor William, *Birmingham*. Scott, Anne Katherine Sibella, *Windermere*. Simmons, Edmund Angus, *West Croydon*. Smith, John, *Wolverhampton*. Stephen, Lewis Gavin, *Balmedie, Aberdeenshire*. Stevenson, Thomas Wilfred, *West Monkseaton, Northumberland*. Stones, Henry Burton, *London*. Tate, Ronald George, *Derby*. Taylor, Eric James, *Morden*. Taylor, John Drury Meade, *Ashford*. Taylor, Ronald, *London*. Thomas, Llewellyn Caswollawn, *Edgware*. Tomlinson, James Bernard, *Southport*. Trinder, George Thomas, *London*. Tucker, John Robert, *Hornchurch*. Tustin, Oliver Arthur, *London*. Williamson, Eric, *Preston*. Wilson, John Allen Robert, *Peterborough*. Wilson, John Charles Eunson, *Edinburgh*. Wilson, Maurice, *Consett, Co. Durham*. Woodville, John Clifford, *Oswestry*. Wright, John, *Eastbourne*.

Notices

THE THIRD GENERAL MEETING, MONDAY, 5 DECEMBER 1938, AT 8 P.M.

The Third General Meeting of the Session 1938-1939 will be held on Monday, 5 December 1938, at 8 p.m., for the following purposes:—

To read the Minutes of the Second General Meeting held on Monday, 21 November 1938; formally to admit members attending for the first time since their election.

Professor W. G. Holford, B.Arch.(Livpl.), M.T.P.I. [*A.*], to read a paper on "The Next Twenty Years."

Members hoping to take part in the discussion may obtain advance copies of the paper on application to the Secretary R.I.B.A.

SPECIAL GENERAL MEETING, MONDAY, 5 DECEMBER 1938

If the resolution to be submitted to the Special General Meeting on Monday, 21 November, is passed at that meeting, a Special General Meeting will be held on Monday, 5 December, at the conclusion of the Third General Meeting, for the purpose of confirming the resolution as passed.

INFORMAL GENERAL MEETING, WEDNESDAY, 14 DECEMBER 1938, AT 6.30 P.M.

The first Informal General Meeting of the Session arranged by the Junior Members' Committee will be held on Wednes-

day, 14 December 1938, at 6.30 p.m., when there will be a discussion on :—

"Official A.R.P. and the Architect."

The discussion will be opened by :

Professor J. B. S. Haldane, M.A., F.R.S., and Mr. R. T. F. Skinner [*A.*].

Mr. K. J. Campbell [*A.*] will be in the chair. Tea will be served from 5.45 p.m.

Members and Students are reminded that there will be no reporters at the meeting and that speakers are expected to express their opinions as freely and as boldly as they wish.

THE USE OF TITLES BY MEMBERS OF THE ROYAL INSTITUTE

In view of the passing of the Architects Registration Act 1938, members whose names are on the Statutory Register are advised to make use simply of the title "Chartered Architect" after the R.I.B.A. affix. The description "Registered Architect" is no longer necessary.

Members who are qualified for registration and have not already done so are reminded of the importance of applying for such registration without delay. Full particulars will be sent on application to the Secretary R.I.B.A.

LICENTIATES AND THE FELLOWSHIP

The present regulations governing the examination of Licentiates who, being otherwise eligible, wish to qualify for admission as Fellows provide that in the first place the candidate shall submit for approval by the Council working drawings of one or more of his executed buildings, supplemented by photographs and by original sketches or measured drawings of actual work, and—

(1) should the work so submitted be, in the opinion of the Council, of sufficient merit to exempt the candidate from further examination, he may be so exempted ;

(2) if the work submitted is approved by the Council the candidate is required to submit himself to an examination ;

(3) if the work so submitted is, in the opinion of the Council, inadequate, his application is not further entertained.

By a resolution of the Council passed on 4 April 1938, on and after 1 January 1939 all candidates whose work is approved will be required to sit for the examination, which will be the design portion of the Special Final Examination, and no candidates will be exempted from the examination.

NOTE.—The above resolution will not affect Licentiates of over 60 years of age applying under Section IV, Clause 4 (c) (ii) of the Supplemental Charter of 1925.

ASSOCIATES AND THE FELLOWSHIP

Associates who are eligible and desirous of transferring to the Fellowship are reminded that if they wish to take advantage of the election to take place on 6 February 1939 (overseas candidates 8 May 1939) they should send the necessary nomination forms to the Secretary R.I.B.A. not later than Saturday, 10 December 1938.

CHRISTMAS HOLIDAY LECTURES TO BOYS AND GIRLS

The twelfth series of informal talks on architecture to boys and girls will be given at the R.I.B.A. during the forthcoming Christmas holidays.

At the invitation of the Council, Mr. R. A. Duncan [*A.*] has kindly consented to give the talks this year. They will be illustrated by lantern slides, and Mr. Duncan has chosen as his subject :—

BUILDING BUILDINGS

Materials and Craftsmen.

Machines and Tools.

Design and Designers.

1. In Roman Times—A.D. 1 to 400.
2. In the Middle Ages—A.D. 400 to 1600.
3. In Modern Times—A.D. 1600 to 1938.

These lectures will form a serial story and give an outline of the wherefore and how of building from Roman to modern times. They will show the relationship between methods, materials and designs—how difficulties were overcome and problems solved—and in designs the objectives and the achievements.

The lectures will be given in the Henry Jarvis Memorial Room, in the R.I.B.A. building at 66 Portland Place, W.1, on the following dates :—

Wednesday, 28 December 1938, at 3.30 p.m.

Friday, 30 December 1938, at 3.30 p.m.

Monday, 2 January 1939, at 3.30 p.m.

Tickets for any or all of the lectures may be obtained from the Secretary of the Royal Institute of British Architects, 66 Portland Place, London, W.1. The tickets are free.

Owing to the limited seating space of the hall, it is hoped that application will not be made for more tickets than can be used.

R.I.B.A. ANNUAL DINNER 1939

The Annual Dinner will take place on Friday, 10 February 1939. Full particulars will be issued to members in due course.

BRITISH ARCHITECTS CONFERENCE, DUBLIN, 21-24 JUNE 1939

The Annual Conference next year of the Royal Institute of British Architects and its Allied and Associated Societies will be held in conjunction with the Centenary Celebration of the Royal Institute of the Architects of Ireland and will take place at Dublin from 21 to 24 June 1939.

The Royal Institute of the Architects of Ireland have in hand the preparation of a most attractive programme and particulars will be issued in due course.

THE R.I.B.A. LONDON ARCHITECTURE BRONZE MEDAL, 1938

The attention of members is drawn to the Form of Nomination and the conditions, subject to which the award will be made, for a building built within a radius of eight miles from Charing Cross during the three years ending 31 December 1938, enclosed with the issue of the JOURNAL of 7 November. Any member of the Royal Institute is at liberty to nominate any building for consideration by the Jury.

Nominations should be sent to the Secretary R.I.B.A. not later than 28 February 1939.

NEW BUILDING MATERIALS AND PREPARATIONS

The Science Committee wish to draw attention to the fact that information in the records of the Building Research Station, Garston, Watford, is freely available to any member of the architectural profession, and suggest that architects would be well advised, when considering the use of new materials and preparations of which they have had no previous experience, to apply to the Director for any information he can impart regarding their properties and application.

THE NATIONAL ASSOCIATION OF WATER USERS

Members are reminded that the National Association of Water Users, on which the R.I.B.A. is represented, exists for the purpose of protecting the interests of consumers.

Members who experience difficulties with water companies, etc., in connection with fittings are recommended to seek the advice of the Association. The address of the Association is 46 Cannon Street, London, E.C.4.

DISCIPLINARY ACTION

The membership of Mr. Cecil Richard Keal Codrington, Licentiate, and Mr. Joseph William Keal Codrington Licentiate, both of 488-490 Kingsland Road, Dalston, London, E.8, has been, by decree of the Council made pursuant to the byelaws, suspended for a period of two years from 7 November 1938, and accordingly they cease during that period to be members of the Royal Institute.

Competitions

The Council and Competitions Committee wish to remind members and members of Allied Societies that it is their duty to refuse to take part in competitions unless the conditions are in conformity with the R.I.B.A. Regulations for the Conduct of Architectural Competitions and have been approved by the Institute.

While, in the case of small limited private competitions, modifications of the R.I.B.A. Regulations may be approved, it is the duty of members who are asked to take part in a limited competition to notify the Secretary of the R.I.B.A. immediately, submitting particulars of the competition. This requirement now forms part of the Code of Professional Practice in which it is ruled that a formal invitation to two or more architects to prepare designs in competition for the same project is deemed a limited competition.

BEDWORTH, WARWICKSHIRE : NEW COUNCIL OFFICES

The Bedworth Urban District Council invite registered architects whose offices are situated in Warwickshire to submit in competition designs for new Council Offices to be erected on a site fronting High Street, Bedworth.

Assessor : Mr. S. N. Cooke [*F.*].
Premiums : £50, £25 and £15.
Last day for submitting designs : 31 January 1939.
Last day for questions : 31 October 1938.

Conditions of the competition may be obtained on application to Mr. Maurice Armson, Clerk of the Council, Council Offices, Bedworth, near Nuneaton. Deposit £1 1s.

BRIERLEY HILL, STAFFS : NEW MUNICIPAL BUILDINGS

The Brierley Hill Urban District Council invite architects of British nationality to submit in competition designs for new Municipal Buildings.

Assessor : Mr. Verner O. Rees [*F.*].
Premiums : £250, £150 and £100.
Last day for submitting designs : 30 November 1938.
Last day for questions : 30 June 1938.

Conditions of the competition may be obtained on application to Mr. F. Oakes, Clerk to the Brierley Hill U.D.C., Council Offices, Moor Street, Brierley Hill, Staffs. Deposit £2 2s.

COSELEY, STAFFS : NEW SCHOOL

The Coseley Education Committee invite registered architects whose addresses are in the area of the Birmingham and Five Counties Architectural Association to submit in competition designs for a new Public Elementary Junior and Infants School to be erected at Lanesfield.

Assessor : Mr. A. C. Bunch [*F.*].
Premiums : £100, £30 and £20.
Last day for submitting designs : 7 January 1939.
Last day for questions : 19 November 1938.

Conditions of the competition may be obtained on application to Mr. Fred J. C. Poole, Secretary for Education, Education Offices, Somerset House, Coseley, nr. Bilston. Deposit £3 3s.

GODALMING : NEW MUNICIPAL BUILDINGS

The Godalming Borough Council invite architects of British nationality to submit in competition designs for new Municipal Offices.

Assessor : Mr. Stanley C. Ramsey [*F.*].
Premiums : £200, £150 and £100.
Last day for submitting designs : 31 January 1939.
Last day for questions : 31 October 1938.

Conditions of the competition may be obtained on application to Mr. A. P. V. Moon, Town Clerk, Town Clerk's Office, Godalming. Deposit £1 1s.

HUTTON, NEAR PRESTON, LANCS: NEW POLICE HEADQUARTERS

The Lancashire Standing Joint Committee for Police and other purposes invite chartered and/or registered architects to submit in competition designs for a new General Police Headquarters and Training School to be erected at Hutton, near Preston.

Assessor: Sir Percy Worthington, Litt.D., F.S.A. [*F.*].

Premiums: £500, £400 and £300.

Conditions of the competition may be obtained on application *before 5 December 1938* to Sir George Etherton, Clerk of the Peace, County Hall, Preston. Deposit, £3 3s.

NEWCASTLE-UPON-TYNE: NEW TOWN HALL

The Council of the City and County of Newcastle-upon-Tyne invite architects of British nationality to submit in competition designs for a new Town Hall.

Assessor: Mr. Verner O. Rees [*F.*].

Premiums: £750, £500 and £300.

The last day for submitting designs has been extended to 31 December 1938.

Last day for questions: 6 July 1938.

ST. GEORGE'S HOSPITAL: RECONSTRUCTION

The President, Vice-President, Treasurer and Governors of St. George's Hospital invite architects practising in the United Kingdom and Northern Ireland to submit in competition designs for the reconstruction of St. George's Hospital, Hyde Park Corner.

Assessors: Dr. H. V. Lanchester [*F.*].
Mr. T. A. Lodge [*F.*].

Premiums: £500, £300 and £200.

Owing to the recent international situation the closing date has been extended to 14 January 1939. Competitors are requested not to send in designs before 15 December 1938.

Last day for questions: 1 March 1938.

Conditions of the competition may be obtained on application to The House Governor, St. George's Hospital, Hyde Park Corner, London, S.W.1. Deposit £2 2s.

SHREWSBURY: NEW SENIOR SCHOOL

The Corporation of Shrewsbury invite architects to submit in competition designs for a new Senior School to be erected at Broom Hall, Ellesmere Road, Shrewsbury.

Assessor: Mr. C. Cowles-Voysey [*F.*].

Premiums: £200, £150 and £100.

The last day for submitting designs has been extended to 30 January 1939.

Last day for questions: 10 September 1938.

Conditions of the competition may be obtained on application to Mr. R. F. Prideaux, Town Clerk, Guildhall, Shrewsbury. Deposit £1 1s.

FORTHCOMING COMPETITIONS

Other competitions which it is proposed to hold, and the conditions for which are not yet available, are as follows:—

BRIGHOUSE: NEW MUNICIPAL BUILDINGS
Assessor: Mr. James R. Adamson [*F.*].

EDMONTON: NEW TOWN HALL BUILDINGS
Assessor: Mr. E. Berry Webber [*A.*].

METROPOLITAN EAR, NOSE AND THROAT HOSPITAL: RECONSTRUCTION
Assessors: Messrs. Charles Holden [*F.*] and Lionel G. Pearson [*F.*].

OLDHAM: ELECTRICITY OFFICES AND DEPARTMENTAL BUILDINGS
Assessor: Professor R. A. Cordingley [*F.*].

WREXHAM: NEW TOWN HALL
Assessor: Mr. Herbert J. Rowse [*F.*].

MEMBERS' COLUMN

Owing to limitation of space, notices in this column are restricted to changes of address, partnerships vacant or wanted, practices for sale or wanted, office accommodation, and appointments vacant. Members are reminded that a column in the Advertisement Section of the Journal is reserved for the advertisements of members seeking appointments in architects' offices. No charge is made for such insertions and the privilege is confined to members who are definitely unemployed.

PARTNERSHIPS WANTED

ASSOCIATE, with considerable varied experience in design of large stores, offices, flats, houses, decorations and in private practice, seeks partnership in well-established London firm. Capital available. Replies in strict confidence.—Box 9108, c/o Secretary R.I.B.A.

ASSOCIATE (Honours Design and A.A. Scholar), with 14 years' varied experience in London and abroad, seeks an appointment with a well-established firm or company either as partner or staff architect. Capital available.—Box 4113, c/o Secretary R.I.B.A.

NEW PRACTICE

MR. JAMES WALLACE [*L.*] has now commenced practice at 16 St. Andrews Crescent, Cardiff (Tel. No.: Cardiff 2017), and would like all trade catalogues, etc., to be sent to this address.

TRADE CATALOGUES WANTED

MR. K. EASTON [*A.*] and MR. F. S. KIRBY [*A.*] would be pleased to receive trade catalogues at The Studio, 23c Onslow Road, Richmond, Surrey.

ASSISTANCE OFFERED

F.R.I.B.A. with extensive experience would like to join an Architect (or firm of architects) in London. Expert supervision and management of work and draughtsmanship if required. Arrangements to be made as to share of own practice.—Apply Box 1411, c/o Secretary R.I.B.A.

OFFICE ACCOMMODATION TO LET

FELLOW with offices in central position West End (London) offers facilities to provincial architect for correspondence, interviews, 'phone, etc., on moderate terms.—Box 5118, c/o Secretary R.I.B.A.

F.R.I.B.A. retiring from practice offers fully equipped offices to young architect desirous of practising in Plymouth, at an agreed valuation. Apply Box 7118, c/o Secretary R.I.B.A.

ASSOCIATE with suite of two rooms on first floor of office building in High Holborn would like young member to share same. Rent £35 per annum inclusive.—Apply Box 2808, c/o Secretary R.I.B.A.

MEMBER has suite of three rooms to let on second floor of a good house near Bedford Square, W.C.1, furnished or unfurnished. Moderate rent.—Apply Box 8118, c/o Secretary R.I.B.A.

COTTAGE WANTED

FELLOW practising in London requires Country Cottage in Home Counties. Must be on high ground with garden and good views. Usual services and in quiet part.—Particulars to Box 6118, c/o Secretary R.I.B.A.

MINUTES I

SESSION 1938-1939

At the Opening General Meeting of the session 1938-1939, held on Monday, 7 November 1938, at 8.30 p.m., Mr. H. S. Goodhart-Rendel, President, in the chair.

The meeting was attended by about 300 members and guests.

The minutes of the twelfth general meeting of the Session 1937-38, held on 20 June 1938, having been published in the JOURNAL, were taken as read, confirmed and signed as correct.

The President delivered his Inaugural Address of the session.

On the motion of Mr. Ewart G. Culpin, M.T.P.I., J.P. [*F.*], the Rt. Hon. the Chairman of the London County Council, seconded by Mr. Alfred C. Bossom, M.P. [*F.*], a vote of thanks was passed to the President by acclamation and was briefly responded to.

The President having alluded to the generous support given by Mr. H. S. E. Vanderpant [*Hon. A.*] to the R.I.B.A. and the Architects' Benevolent Society, then unveiled and formally presented to the Institute a bronze head of Mr. Vanderpant, executed by Miss Dora Gordine.

Mr. Vanderpant and Miss Gordine briefly expressed their thanks to the meeting.

The President presented the R.I.B.A. London Architecture Bronze Medal and Diploma for 1937 to Messrs. Robert Atkinson (Mr. Robert Atkinson and Mr. A. F. B. Anderson [*FF.*]) for their building, Stockleigh Hall (Flats), Prince Albert Road, Regent's Park, N.W.1.

Mr. Atkinson and Mr. Anderson briefly thanked the President and Council for the honour conferred upon them.

Mr. M. I. Tanchan, representing Messrs. Stockleigh Hall Estates, Ltd., the owners of the building, and Mr. W. E. Cooper, representing Messrs. W. P. Blay, Ltd., the contractors for the building, also spoke.

The proceedings closed at 9.50 p.m.

Architects' and Surveyors' Approved Society

ARCHITECTS' ASSISTANTS' INSURANCE FOR THE NATIONAL HEALTH AND PENSIONS ACTS

Architects' Assistants are advised to apply for the prospectus of the Architects' and Surveyors' Approved Society, which may be obtained from the Secretary of the Society, 113 High Holborn, London, W.C.1.

The Society deals with questions of insurability for the National Health and Pensions Acts (for England) under which, in general, those employed at remuneration not exceeding £250 per annum are compulsorily insurable.

In addition to the usual sickness, disablement and maternity benefits, the Society makes grants towards the cost of dental or optical treatment (including provision of spectacles).

No membership fee is payable beyond the normal Health and Pensions Insurance contribution.

The R.I.B.A. has representatives on the Committee of Management, and insured Assistants joining the Society can rely on prompt and sympathetic settlement of claims.

Architects' Benevolent Society

66 PORTLAND PLACE, W.1
FOUNDED 1850

The object of the Society is to afford assistance to architects, architects' assistants, and their widows and children by means of grants and pensions.

Subscriptions and donations of any amount are urgently needed. An annual subscriber of £1 1s. is entitled to recommend annually two applicants for relief.

A.B.S. INSURANCE DEPARTMENT

PENSION AND FAMILY PROVISION SCHEME FOR ARCHITECTS

This scheme has been specially designed by the A.B.S. Insurance Committee for members of the R.I.B.A. and its Allied and Associated Societies. It provides :—

1. A pension for members on retirement at age 65.
2. Widows' pension—payable to the widow from the time when, if the member had lived, he would have attained age 65.
3. Family protection—if the member dies before age 65 a yearly payment is made to his dependants from the date of his death till Benefit No. 2 becomes available.

The benefits may be purchased in units of £50 per annum up to a maximum of £500 per annum.

Please write for full particulars to the Secretary, A.B.S. Insurance Department, 66 Portland Place, London, W.1. Telephone : Welbeck 5721.

It is desired to point out that the opinions of writers of articles and letters which appear in the R.I.B.A. JOURNAL must be taken as the individual opinions of their authors and not as representative expressions of the Institute.

Members sending remittances by postal order for subscriptions of Institute publications are warned of the necessity of complying with Post Office Regulations with regard to this method of payment. Postal orders should be made payable to the Secretary R.I.B.A. and crossed.

Members wishing to contribute notices or correspondence must send them addressed to the Editor not later than the Tuesday prior to the date of publication.

Back numbers of the JOURNAL can be obtained at the price of 1s. 9d., including postage throughout the world. For orders of more than six copies discounts are given. Orders must be prepaid.

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